AppleWorks Forum

The Monthly Publication of **NAUG: *The National AppleWorks Users Group***

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Support for AppleWorks and ///EZ Pieces Users

Speeding Up TransWarp GS Cards

Dear NAUG:

I heard that I can speed up my TransWarp GS card from its current 7 megahertz speed to almost 13 megahertz. My dealer knows nothing about this. Can you help?

Barbara McDonald
Dearborn, Michigan

[Ed: While it is true that you can speed up a TransWarp GS accelerator so it runs between 10 and 13 megahertz, the upgrade is neither trivial nor inexpensive. The process requires that you desolder and solder parts on the TransWarp GS board (at the risk of ruining the card), costs more than $150, and voids your TransWarp GS warranty. In addition, there is no guarantee that the upgraded card will work; the only guarantee is that the new microprocesser you must install on the card was in good condition when it left the factory.

The upgrade involves replacing the 65C816 processor on the TransWarp GS with a special high-speed version of the chip. You can buy the high speed processor from the Western Design Center (WDC), the developer of the chip. The replacement costs $95 (plus $3 s/h). You will also need to purchase and replace the oscillator and the Cache SRAMs on the TransWarp GS board. (WDC does not supply these parts but lists suppliers in a set of instructions that describe how to upgrade the board.) To get the maximum speed from these chips, you also have to use an adjustable voltage regulator to change the voltage going to the board.

If you are still interested after all these warnings, contact the Western Design Center and request their "Upgrading a TransWarp GS Board" information kit.

Western Design Center, 2166 East Brown Road, Mesa, Arizona 85213; (602) 962-4545.]

Changing File Types

Dear Cathleen:

I recently used version 9.0 of Copy II+ to format some data disks and then copied my AppleWorks word processor files onto those disks. When I tried to load those files onto the AppleWorks desktop, AppleWorks reported that there were no AppleWorks files on the disk. I could list the files from the Other Activities Menu, but they appeared in the catalog with a filetype of "Other". I loaded the files onto the AppleWorks desktop as text (ASCII) files, but the text appeared amidst some other characters, including what looked like a tab ruler line.

I cataloged the disks with Copy II+ and each of the filetypes was listed as "BIN", not "AWP" (AppleWorks Word Processor). Apparently, Copy II+ changed the filetype designator for each file.

Is there any way to make these files recognizable to AppleWorks? Is this a problem with Copy II+?

Thomas Waldrop
Groton, Connecticut

[Ed: You can recover these files by using TimeOut FileMaster to change the filetype designator from "BIN" to "AWP". The procedure is to boot up AppleWorks, issue an Apple-Escape to access the TimeOut Menu, and select FileMaster. Press the Return Key to select "File Activities" and choose #8, "Change file type". Then follow the on-screen prompts to change all the filetypes to "AWP"; the on-screen prompts make the process easy.

I tested the file copy function of Copy II+ 9.0 and could not replicate your problem. Central Point Software, the developers of Copy II+, also report no problems with changed file type designators when copying AppleWorks files. They suggest that you might have inadvertently formatted your disks in DOS 3.3 format, copied the AppleWorks files onto the DOS 3.3 disks, and then transferred them from DOS 3.3 back to ProDOS. Since there is no AWP filetype designator in DOS 3.3, Copy II+ changes the AppleWorks filetype designators to BIN if you copy these files onto a DOS 3.3 disk.]

Laptop Computers and AppleWorks

Dear Cathleen:

Does anyone produce a laptop computer that is compatible with AppleWorks?

Earle F. Zeigler
London, Ontario, Canada

[Ed: This is a bad news / good news situation.

The bad news is that there are no laptop computers available that run AppleWorks. While you can configure an Apple IIc to run as a portable, you end up with a 20 pound "luggable" computer with a barely readable screen and a single disk drive. Obviously, I cannot recommend that configuration. (See the article entitled "Portable AppleWorks" in the September 1986 issue of the ***AppleWorks Forum*** *for more information about configuring a IIc as a portable.)*

The good news is that you can use virtually any laptop computer to produce files that you can import into AppleWorks.

The best values in laptop computers today can be found in the MS-DOS world, so you could prepare your word processor files on any MS-DOS laptop and transfer the files into AppleWorks.

There are at least two ways to accomplish that transfer. The easiest approach is to use Softspoken's Cross-Works program to transfer the data. Cross-Works transfers files and converts them between AppleWorks, WordPerfect, Microsoft Works, dBASE, and Lotus 1-2-3 formats. The Cross-Works package includes the necessary software for your Apple II and MS-DOS laptop and the cable you need to connect the two computers. (See the review of Cross-Works in the May 1989 issue of the ***AppleWorks Forum****.)*

If you don't want to use Cross-Works, you can save your files in ASCII format on the laptop and use any communication program on the Apple II and the laptop to transfer the files into AppleWorks. Complete directions appear in the articles entitled "How to Transfer Files into AppleWorks" in the September and October 1988 issues of the ***AppleWorks Forum****.*

If you do not already own a laptop and if price is a consideration, look at the Tandy 1100FD or the Bondwell laptop computer. The Tandy includes built-in word processing and telecommunications software and has a single 3.5-inch non-Apple compatible disk drive. The Bondwell includes two non-Apple-compatible drives and does not have any built-in software, although DAK, the catalog company selling the computer, bundles the Bondwell with all the software you need.

The Tandy 1100FD has a suggested list price of $999; until June 30, educators can get a 20% discount on this computer and many other Radio Shack units. (Ask your local Radio Shack store for information about the Educator's Discount Program.)

The heavier and larger Bondwell system costs $799 (plus $32 s/h) including all necessary software from DAK ((800) 325-0800). Both Tandy and DAK have excellent guarantees in case you are not satisfied.]

The ***National AppleWorks Users Group*** **(NAUG)** is an association that supports AppleWorks users. **NAUG** provides technical support and information about AppleWorks and enhancements to that program. Our primary means of communicating with members is through the monthly newsletter entitled the ***AppleWorks Forum.***

AppleWorks Forum

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Inexpensive Hard Drives for Apple IIs

Dear Cathleen:

The September 1989 issue of the ***AppleWorks Forum*** includes information about inexpensive SCSI-compatible hard disk drives from Ehman Engineering. Your article asked if any **NAUG** members are using Ehman drives with AppleWorks. I run AppleWorks 3.0 on an Ehman 45 megabyte drive that is connected to my Apple IIe with an Apple SCSI card. The drive and card cost only $569.

Delivery time was reasonable; it took about three weeks for me to get the drive. I am satisfied with that turn-around time considering shipment was by UPS ground from Wyoming to New Jersey. *[Ed: Two other **NAUG** members report that they received their Ehman drives within two weeks of placing an order.]*

I got the drive working easily but could not use the Macintosh utility software that came with the system. Instead, I used the utilities supplied with the Apple SCSI card and re-formatted the drive with the Apple SCSI "HDSCPARTITION" program, then with the Filer program on my ProDOS Users Disk.

Two notes of interest to potential buyers:

1. The 45 megabyte drive offers only 40 megabytes of storage under ProDOS; the 45 megabyte claim is for Macintosh computers.
2. You should plan to partition the 40 megabyte drive into two 20 megabyte volumes. I could not partition the drive into different size volumes.

Frank Wassner
Westwood, New Jersey

*[Ed: Ehman Engineering recently lowered the prices of their hard disk drive systems. **NAUG** members might also consider drives from Hard Drives International (HDI), another manufacturer of low-priced SCSI drives that should be compatible with Apple SCSI cards running on Apple IIe and IIGS systems. (**NAUG** has not tested the drives from either Ehman or HDI.) Figure 1 lists the current prices for the drives from both companies. Add the cost of shipping and an Apple SCSI card (suggested retail price of $129) to these prices. The drives with Quantum mechanisms have faster access times than the Seagate systems.*

Ehman Engineering, P.O. Box 2126, Evanston, Wyoming 82931; (307) 789-3830.

Hard Drives International, 1912 W. Fourth Street, Tempe, Arizona 85281; (800) 234-3475.]

Figure 1: Prices for Low Cost SCSI Drives

Size	Mechanism	Ehman Price	HDI Price
20MB	Seagate	$299	$319
30MB	Seagate	349	349
40MB	Quantum	459	459
45MB	Seagate	399	399
45MB*	SyQuest	649	649
60MB	Seagate	449	449
80MB	Seagate	499	499
80MB	Quantum	649	649
105MB	Quantum	699	699
180MB	Fujitsu	1099	NA

*Removable media

RepairWorks Compatibility

Dear **NAUG**:

Would you please tell your readers that RepairWorks will not run on an unenhanced Apple IIe. The program runs on any enhanced IIe and on all IIGS, IIc, IIc Plus, and Laser 128 computers.

Steven Mediodia
Quality Computers

[Ed: You can tell if you have an enhanced Apple IIe by turning on the computer without any disks in the drives. If the top of the screen shows "Apple //e" (with slashes to represent the "2") you have an enhanced IIe. Unenhanced IIe's display "Apple][e", using the right and left bracket symbols to construct the display.

***NAUG** published a favorable review of RepairWorks in the April 1989 issue of the **AppleWorks Forum**.]*

Letters...

Technical Support by Fax

Dear NAUG:

Can any of NAUG's Members Helping Members volunteers be reached by fax?

Otto Trixner
Glan, Austria
Fax #: 011/43/42/12/21 3 72

*[Ed: Providing technical support by fax is an excellent idea. Would all Members Helping Members volunteers who can accept fax please send NAUG their fax numbers for publication in the **AppleWorks Forum**.*

*If you are not a Members Helping Members consultant, please consider volunteering for this valuable program. Write NAUG and ask for a Members Helping Members form or complete the form that appeared in the September 1989 issue of the **AppleWorks Forum**.]*

Members Get Their Zip Chips

Dear Cathleen,

I just received a replacement for the defective Zip Chip I returned to Zip Technology almost a year ago. Thanks to you and NAUG for your help getting replacement products.

Jim Brownlow, Jr.
Western Spring, Illinois

[Ed: This is one of more than a dozen letters NAUG received indicating that Zip Technology has fulfilled its promise and replaced all NAUG members' defective chips. If you have not yet received a replacement chip for your defective unit, please notify both Zip and NAUG immediately.

*We are presently testing Zip's 8-megahertz accelerator chip and will publish a review of this product in next month's issue of the **AppleWorks Forum**.]*

Spreadsheet Tips

How to Preserve Cell Formats in AppleWorks 3.0

by Warren Williams

One of the important new features available in the AppleWorks 3.0 spreadsheet module is the program's ability to treat labels as if they were values. This feature lets you use AppleWorks' @IF, @CHOOSE, and @LOOKUP functions to display words or numbers in any cell. For example, you can use the @IF statement to test if a value is within an allowable range. If the user enters a reasonable value, you can tell AppleWorks to display a calculated answer. If the user enters an unreasonable value, you can display the text "Check G3" or any other message you want to give the user.

However, once you display a label in a cell, the cell loses the format specified for the values that appear in that cell. For example, if you used the Apple-L command to display the numeric answer in dollar format, numbers no longer appear in dollar format after the user sees the label "Check G3".

A Work Around

Fortunately, there is a way to preserve the format of these values. Displaying text in a cell cancels the value format set with the Apple-L command but does not affect the standard format you set with Apple-V. The trick is to use AppleWorks' Apple-V command to specify the format for the numbers that will appear in these cells. You can then use the Apple-L command to set the value format for all the cells that do not shift between text and numeric entries.

Although this technique only works if all the cells that display labels have the same value format, you should be able to overcome this limitation in most settings.

*[Ed: See the article entitled "How to Manipulate Text in AppleWorks 3.0" in the August 1989 issue of the **AppleWorks Forum** for more information about how to use @IF, @CHOOSE, and @LOOKUP to display text in spreadsheet cells.]*

Introduction to AppleWorks GS

Easy-to-follow activities help you learn by doing.

Explore the basics of *AppleWorks GS*.

Introduction to AppleWorks GS is a collection of practical explorations designed to introduce basic *AppleWorks GS* concepts and features. Learn about *Works'* fully integrated modules—word processing, spreadsheet, database, page layout, graphics, and communications—as you successfully design and implement a simulated school fund-raiser. Each fund-raising activity focuses on a particular *AppleWorks GS* module. So as you complete each hands-on project, you become a more knowledgeable and skilled user.

The *Introduction to AppleWorks GS* advantage.

The nine explorations in ***Introduction to AppleWorks GS*** are designed as independent units that can be used as the basis for a workshop, as a text, or for self-paced, independent study. In no time, you'll be making better and more efficient use of *AppleWorks GS* and your Apple IIGS computer.

Product #T-646-3. Includes a manual and 3.5" activity disk. AppleWorks GS must be purchased separately.

Six versatile modules in one all-around package.

Word Processing
- includes a built-in spell checker and thesaurus
- merges information from database documents

Spreadsheet
- generates charts and graphs
- utilizes powerful calculation features

Database
- stores graphics and text
- designs and prints reports
- creates templates and mailing labels

Page Layout
- combines text and graphics by using master pages, multiple text columns, guides, and graphics tools

Graphics
- includes painting, drawing, and editing tools

Communications
- allows for the exchange of information between computers

Hardware Requirements

Apple® IIGS with ROM 01 and 1.25 mb or ROM 03 and 1.125 mb of memory, two 3.5" disk drives, and a color monitor. An ImageWriter printer with color ribbon is recommended but is optional.

Introduction to AppleWorks® GS Order Form

Name _____

Title _____

Address _____

City _____ State ____ Zip _____

Phone (___) _____

3490 Lexington Avenue North
St. Paul, MN 55126
Call: 800/228-3504 or 612/481-3500 ext. 527

Qty	Title	Product Number	Price
	Participant Package: Manual and a 3.5' data disk. Each $19.95	T-646-305	
	Quantity Discount Rate. (Participant Package at quantities of 10 or more for $17.75 each.)	T-646-305	
	Presenter Notes and reproducible overhead materials. Each $20.00	T-647-M	
		Minnesota residents add 6% sales tax	
		TOTAL	

When you order materials using the Classroom or Workshop Discount Rate, you save 25% over the regular Participant Package price!

Method of Payment:

☐ Enclosed is full payment (check only)

☐ Please invoice per attached Purchase Order No. _____

☐ Charge this order to my charge account as I have indicated, to be paid according to the current terms of that account.

☐ VISA ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ ☐☐☐☐ Expiration Date

_____ Authorized Charge Card Signature

The Boot Up Process

by Randy Brandt

This is the first in a series of articles that describe the internal workings of AppleWorks 3.0. These articles will help intermediate and advanced AppleWorks users understand why the program behaves the way that it does. Mr. Brandt is one of the authors of AppleWorks 3.0.

There are at least three ways to launch AppleWorks: by booting your computer with an AppleWorks Startup Disk, by using a program selector, or by typing the necessary BASIC commands. However, loading AppleWorks into memory follows a similar path no matter which procedure you use to start the program. In this article, I will describe what occurs each time you launch AppleWorks.

Booting a Disk

Whenever you boot your system with a disk containing the ProDOS operating system, the computer loads and runs ProDOS. ProDOS then looks for the first system file with a name that ends with ".SYSTEM" and launches that file.

The 5.25-inch AppleWorks Startup Disk and 3.5-inch Program Disk both include ProDOS and a file called APLWORKS.SYSTEM. If you boot your computer with either disk, your system will load ProDOS into memory and launch the file APLWORKS.SYSTEM.

TimeOut UltraMacros' installation process installs a file named ULTRA.SYSTEM on your AppleWorks disk and renames the AppleWorks program file from APLWORKS.SYSTEM to APLWORKS.SYS. After you install UltraMacros, your system will load ProDOS into RAM and then launch the file ULTRA.SYSTEM, which in turn launches APLWORKS.SYS.

The more enhancements you make to AppleWorks, the more complex the process becomes. For example, if you use SpellCopy to automatically copy your spelling dictionaries and other files into memory, the program installs SPELCOPY.SYSTEM on your disk and renames APLWORKS.SYSTEM to APLWORKS.SYS. If you have SpellCopy on your AppleWorks Startup Disk, it copies the dictionaries and then launches either UltraMacros or AppleWorks.

Using Program Selectors or BASIC

If you use a program selector or BASIC to launch AppleWorks, you have already loaded ProDOS into RAM. All you need do now is select the system file you want to run. UltraMacros users can choose ULTRA.SYSTEM to launch UltraMacros (which then launches AppleWorks) or can select APLWORKS.SYS to run AppleWorks without UltraMacros. An Applied Engineering memory card user might pick BASIC.SYSTEM to run a program for setting up a RAM disk prior to running AppleWorks.

APLWORKS.SYSTEM

The file APLWORKS.SYSTEM contains the startup code, and much of the main controlling code for AppleWorks. This includes the keyboard and screen display routines used by every facet of the program.

The first thing that APLWORKS.SYSTEM does is make certain it is running on a machine with at least 128K. Then it locates itself in memory so the permanent code, called the Host, is in place to control AppleWorks.

Next, AppleWorks sets up its working environment. First, it disconnects /RAM, the small RAM disk set up by ProDOS that uses the second 64K memory bank in all 128K machines. Since that area of memory will be used to store AppleWorks

How to Save Space on Your Disks

Once you know how ProDOS decides which program to launch, you can rearrange your disks to force ProDOS to launch any program you choose. All you need do is reorganize the catalog on the disk so the system file you want to launch is the first file in the catalog.

Two popular utility programs let you reorganize the files on a disk. Copy II+, version 9.0 and later, offers a menu-driven option that lets you sort the files on the disk catalog in any order you specify. CAT.DOCTOR, a utility program on Glen Bredon's ProSel disk, also lets you reorganize the disk catalog.

If you do not have Copy II+ or ProSel, you can use any disk utility program to create a new disk that has ProDOS followed by the system file you want to launch from that disk. Follow these steps to prepare a bootable disk that launches any ProDOS program you specify:

1. Use a disk utility program to format a blank disk.
2. Copy ProDOS from the original disk onto the newly formatted disk.
3. Copy the system file that launches the program you want to run.
4. Use the file copy program to transfer the remaining files from the original disk onto the new disk. When you boot your computer with this disk, ProDOS will launch the first system file you copied onto the disk.

If you want to rearrange the existing files on a disk, the quickest way to get the desired system file to run is to swap the position of two .SYSTEM files on the disk. Proceed as follows:

1. Copy both the first ".SYSTEM" file on the disk and the desired file onto another disk.
2. Delete the two files from the original disk.
3. Copy the desired start file back, followed by the other file.
4. Since ProDOS always adds a new file to the directory in the first available directory position, your two files will now be swapped and ProDOS will launch the correct file.

desktop file information, any files on the RAM disk would be destroyed anyway. Disconnecting /RAM keeps users from trying to use it to store files.

Then AppleWorks stores the pathname that was used to start APLWORKS.SYSTEM. AppleWorks uses that pathname to locate the other AppleWorks files, no matter what prefix was set when you launched the program. For example, you could set the prefix to "/HD", and then launch AppleWorks from Applesoft BASIC with the command "-/HD/AW/APLWORKS.SYSTEM". AppleWorks would know that its files are in "/HD/AW" and not in the prefix-specified directory.

Memory Managers

Next, AppleWorks chooses the memory manager that is appropriate for your computer. (AppleWorks comes with four memory managers that I will discuss in greater detail in a future article in this series.) The memory manager contains the code that stores and recalls desktop information; having different memory managers lets AppleWorks use the unique features of the various memory configurations found in Apple II systems.

AppleWorks follows these steps to select the appropriate memory manager:

1. The program checks if it is running on a IIGS. If so, it loads SEG.RM. If not, it tries step 2.
2. Now that AppleWorks knows it is not running on a IIGS, it checks if you have an auxiliary slot memory board such as a RamWorks, Z-Ram, or MultiRAM memory card. *[Ed: See the sidebar entitled "Memory Cards: Which Type Do You Own?" on page 8 of the February 1990 issue of the* ***AppleWorks Forum*** *for information about the different types of memory cards.]* If AppleWorks finds a card with at least two 64K banks of memory, the program loads SEG.AM. If not, it tries step 3.

   (Thanks largely to requests from **NAUG** member Dave Gair, we purposely have

AppleWorks test first for an auxiliary slot card. Thus, if you have both an auxiliary slot card and a peripheral slot card, you can use the peripheral slot card as a RAM disk and the auxiliary slot card to expand the AppleWorks desktop.)

3. AppleWorks then checks if you have a peripheral slot ("slinky") card such as a RamFactor, RamExpress, or Apple Memory Card. If it finds a peripheral slot card, AppleWorks loads SEG.XM and creates a dummy disk file to use for desktop memory. If this fails, the program proceeds to step 4.
4. Since you do not have a IIGS, or an auxiliary slot card, or a peripheral slot card in your computer, AppleWorks assumes that you have only 128K of memory in an Apple IIe or IIc, and it loads SEG.ØØ. This leaves about 40K for desktop memory after space is reserved for the program and related files.

AppleWorks next asks the memory manager to allocate the available memory and compute the amount of available desktop space.

Note that AppleWorks only uses one memory manager on any particular hardware configuration; you can delete the extra managers from your working AppleWorks disk. For example, IIGS users can delete SEG.XM, SEG.AM, and SEG.ØØ, leaving only SEG.RM on the disk.

Environmental Aspects

The next step is to load the file SEG.EL. This file contains the elementary arithmetic functions for SANE, the Standard Apple Numerics Environment. The memory manager copies SEG.EL onto the language card area of memory, where it provides the math routines used by the spreadsheet and data base modules.

Then AppleWorks scans the Apple II slots to identify your disk drive and printer slots. It stores that information for later use.

Next, AppleWorks loads SEG.ER, the Environment Record file that contains the settings you can modify from the Standard Settings Menu. This file contains your preferred preloading settings, the spell checker settings, date/time formats, the standard data disk, and printer drivers. (Note that while SEG.PR contains all the printer drivers, AppleWorks only accesses SEG.PR when you change the standard settings. Once you configure AppleWorks for your printer, you no longer need SEG.PR on your working disk.)

With SEG.ER in memory, AppleWorks checks ProDOS to see if you have a clock. If it finds a clock, AppleWorks reads the clock to find the current date. Otherwise the program prompts you to enter the date. AppleWorks then stores the date in the file SEG.ER.

Preloading

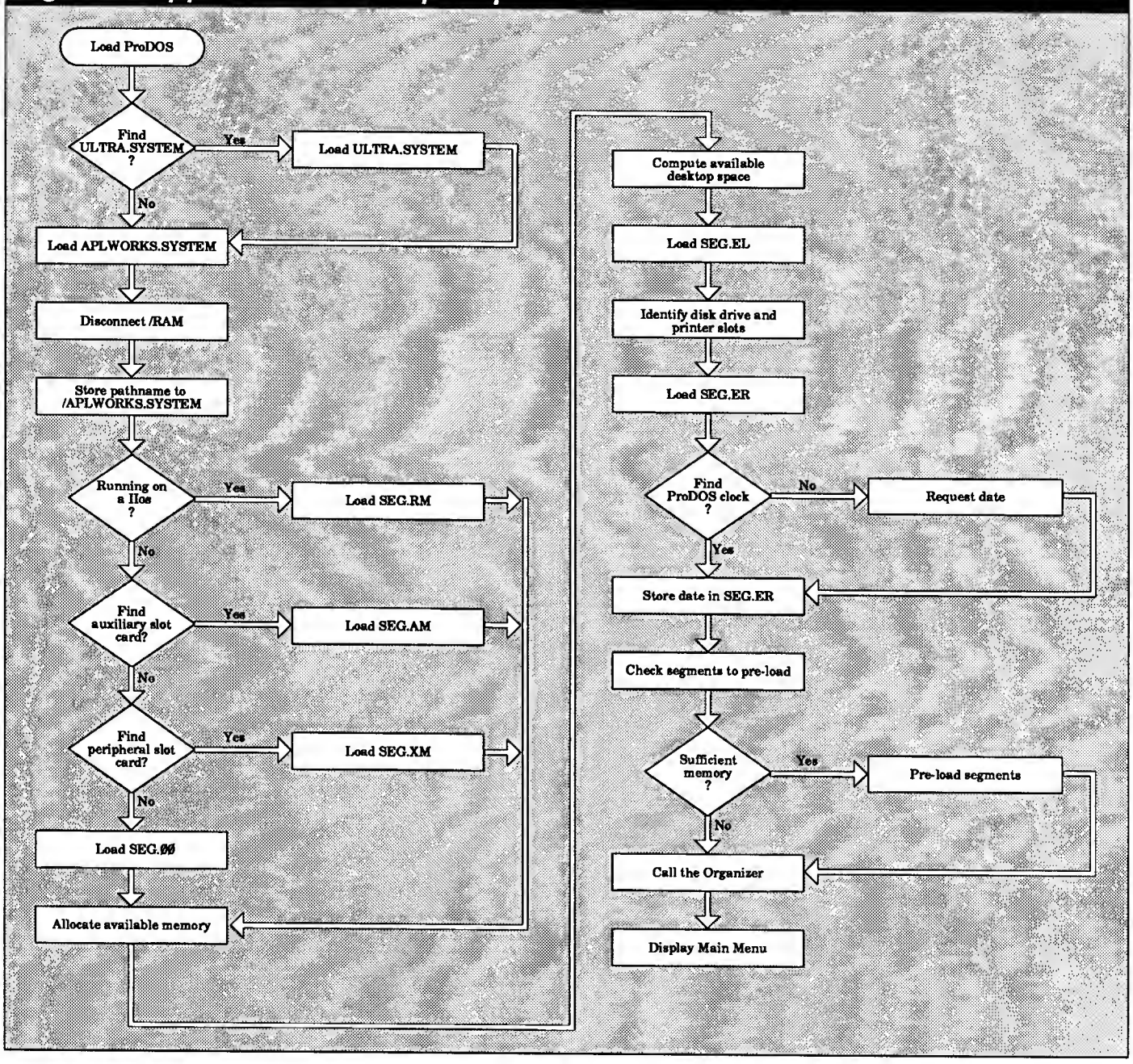
The next step in the startup process is to preload any AppleWorks modules you specified. AppleWorks checks if you have sufficient memory and then loads the selected segments into desktop memory where they can be retrieved quickly.

AppleWorks consists of more than 30 segments which are managed by the Host. These segments, known as overlays, let a large program run on a machine which has insufficient memory to load the entire program. Any time AppleWorks needs a segment, the Host checks if the segment is already

A Tip for 5.25-inch Disk Users

AppleWorks is a large program; the complete program requires three sides of a 5.25-inch disk, and all disk volumes must have the same volume name (the name on all the original disks is /APPLEWORKS). However, ProDOS cannot manage multiple disks with the same volume name. As a result, 5.25-inch disk users who want to switch between modules cannot simply insert the appropriate disk in an empty drive while leaving a different AppleWorks disk in the first drive. ProDOS will not look at the second drive because it "knows" that drive one holds the volume that AppleWorks is requesting. However, if you open the door on the first drive, ProDOS will hunt through the remaining disk devices for the correct program file and will find the second AppleWorks disk. Thus, you can leave AppleWorks disks in both drives and force ProDOS to find the correct disk by closing and opening the doors on the two drives.

Figure 1: AppleWorks Boot Up Sequence



stored on the desktop. If the segment is there, the Host immediately retrieves it.

If the segment is not in memory, the Host loads it from the disk. That is why the disk drive may activate the first time you perform an AppleWorks task but not the second time you use the same command. When the Host finds the segment, it loads the code from the disk and tries to store that code on the desktop so that succeeding calls for the segment can be answered without a disk access. AppleWorks displays a message such as "Place the DB PROGRAM disk in a drive" when it cannot find the appropriate segment on a disk in a drive.

Now that everything is loaded and initialized, AppleWorks calls the Organizer segment to display the Main Menu and you are ready to work. I will discuss the Organizer in the next article in this series.

Summary

Figure 1 contains a flowchart that depicts the steps that occur when you boot AppleWorks 3.0. You

also learned the following concepts about AppleWorks 3.0:

1. ProDOS always looks for the first system file whose name ends with ".SYSTEM" and launches it. You can manipulate which program boots from a disk by reordering the system files on that disk.
2. Your copy of AppleWorks does not use all the files on the disk. You can save disk space by deleting the file SEG.PR and the unused memory managers once you configure a working AppleWorks disk.
3. There is a rationale behind AppleWorks' seemingly random disk accesses.

Next month I will describe AppleWorks' Organizer; the "command center" for AppleWorks.

[Randy Brandt, an author of AppleWorks 3.0, is the developer of TimeOut UltraMacros, PowerPack, and numerous other AppleWorks enhancements. Mr. Brandt also owns JEM Software, a company that produces AppleWorks enhancements.]

FRENCH GERMAN ITALIAN
EuroWorks™
v3.0
v2.0
PORTUGUESE SPANISH

Type accented foreign text quickly and simply with the classic AppleWorks® word processor. Then, from **inside** AppleWorks, **EuroWorks** prints your foreign text on an ImageWriter® or compatible printer.

Foreign word processor files may include every character on your American keyboard plus 13 French, 7 German, 10 Italian, 13 Portuguese, or 10 Spanish: just two sensible keystrokes per foreign character.

EuroWorks requires an Apple DMP; ImageWriter I, II, or LQ; Scribe; an MT85/86; or a Seikosha SP-1000AP printer. **EuroWorks** is compatible with, but does not require, the TimeOut™ series from Beagle Bros, Inc.

EuroWorks v3.0 for AppleWorks v3.0
EuroWorks v2.0 for AppleWorks v2.0 or v2.1

French...$24 Spanish...$24
ALL FIVE...on one disk...$39
USA, Canada, Mexico postpaid; others add $3
AppleWorks®, ImageWriter® by Apple Computer, Inc.

Check, MO, Net-30 School PO, Visa, MC
The S.A. AuTeur Co: A70
P.O. Box 7459 Beaverton, OR 97007
(503) 645-2306
MasterCard VISA

Beagle Releases TextTools, MacroEase, and SuperFonts Activity Guide

By the time you read this, Beagle Bros should be shipping TimeOut TextTools and MacroEase. A description of both products appears in the Beagle Bros Update article in the April issue of the ***AppleWorks Forum***.

Beagle continues to experience delays in the development of TeleComm 1.2 and has not set a release date for this update. **NAUG** members who order TeleComm will receive version 1.1 and will get a free upgrade to version 1.2 when it becomes available. If you purchase TeleComm, please copy the version 1.1 disk for your own use and then return the original with a self-addressed, stamped mailer to **NAUG.** We will ship version 1.2 as soon as we receive copies from Beagle.

Beagle also announced the release of the SuperFonts Activity Guide, edited by Dave Chesebrough, editor of the AppleWorks Educator, and Jim Carlisle, founder of the Teachers Idea and Information Exchange. The SuperFonts Activity Guide consists of a 166-page workbook and a disk that contains teaching materials and activities to help educators use TimeOut SuperFonts in the classroom and for their personal productivity. Lessons include how to develop and print an advertisement, how to write letters in code using graphic fonts, how to prepare mathematics and science lessons and quizzes, how to print in foreign languages, how to print two-column reports, and how to print musical notes with SuperFonts. The licensing agreement gives teachers permission to duplicate the workbook materials and disks for their own classroom.

The SuperFonts Activity Guide has a suggested list price of $49.95 ($99.95 including TimeOut SuperFonts) and is available for $34.95 ($69.95 including SuperFonts), plus $3 s/h, directly from **NAUG**.

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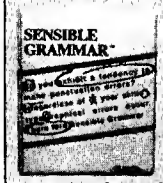

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FlexiCal: The Automated Appointment Calendar

by Gary Hayman

The seventeenth century writer, Sir Thomas Browne, stated "... there is music wherever there is a harmony, order, or proportion." Lester Simpson's FlexiCal program may not make your computer sing, but it certainly can bring harmony, order, and proportion to your busy schedule.

Functionality

FlexiCal is a TimeOut enhancement for AppleWorks 2.0, 2.1, or 3.0 that produces daily, weekly, and monthly calendars that help you organize your schedule. In its most basic form, FlexiCal prints blank calendars you can fill in manually, much as you would enter appointments in a calendar you can buy at an office supply store. However, I would not recommend buying a $30 program for this purpose alone. It is FlexiCal's automated features that make it a valuable program for educators, business people, professionals, and others who must keep track of an ever-changing busy schedule.

The macros built into FlexiCal make the program easy to use. FlexiCal's macros can insert, delete, and transfer information between dates and calendars. For example, you can enter your appointments into a monthly calendar, and FlexiCal's macros will automatically prepare weekly calendars you can view on the screen or carry with you.

Although FlexiCal gets much of its power from its use of macros, it does not require you to own a macro program; FlexiCal includes a special run-time version of TimeOut UltraMacros that provides access to all the macros on the disk.

Figure 1: Blank FlexiCal Monthly Calendar

```
File: APRIL 1991                    REVIEW/ADD/CHANGE          Escape: Main Menu
=========I====J=K=====L=========M==========N====O=P=====Q=========R=========
  2|MONTH  - APRIL 1991
  3|=========||=============================||=============================
  4|          ||            MONDAY           ||            TUESDAY
  5|=========||=============================||=============================
  6|          ||    1)                       ||    2)
  7|_________ || ________________________ || ________________________
  8|_________ || ________________________ || ________________________
  9|_________ || ________________________ || ________________________
 10|_________ || ________________________ || ________________________
 11|_________ || ________________________ || ________________________
 12|_________ || ________________________ || ________________________
 13|_________ || ________________________ || ________________________
 14|_________ || ________________________ || ________________________
 15|_________ || ________________________ || ________________________
 16|_________ || ________________________ || ________________________
 17|=========||=============================||=============================
 18|          ||    8)                       ||    9)
 19|_________ || ________________________ || ________________________

Q2: (Label, Protect-N)

Type entry or use A commands                                  1612K Avai
```

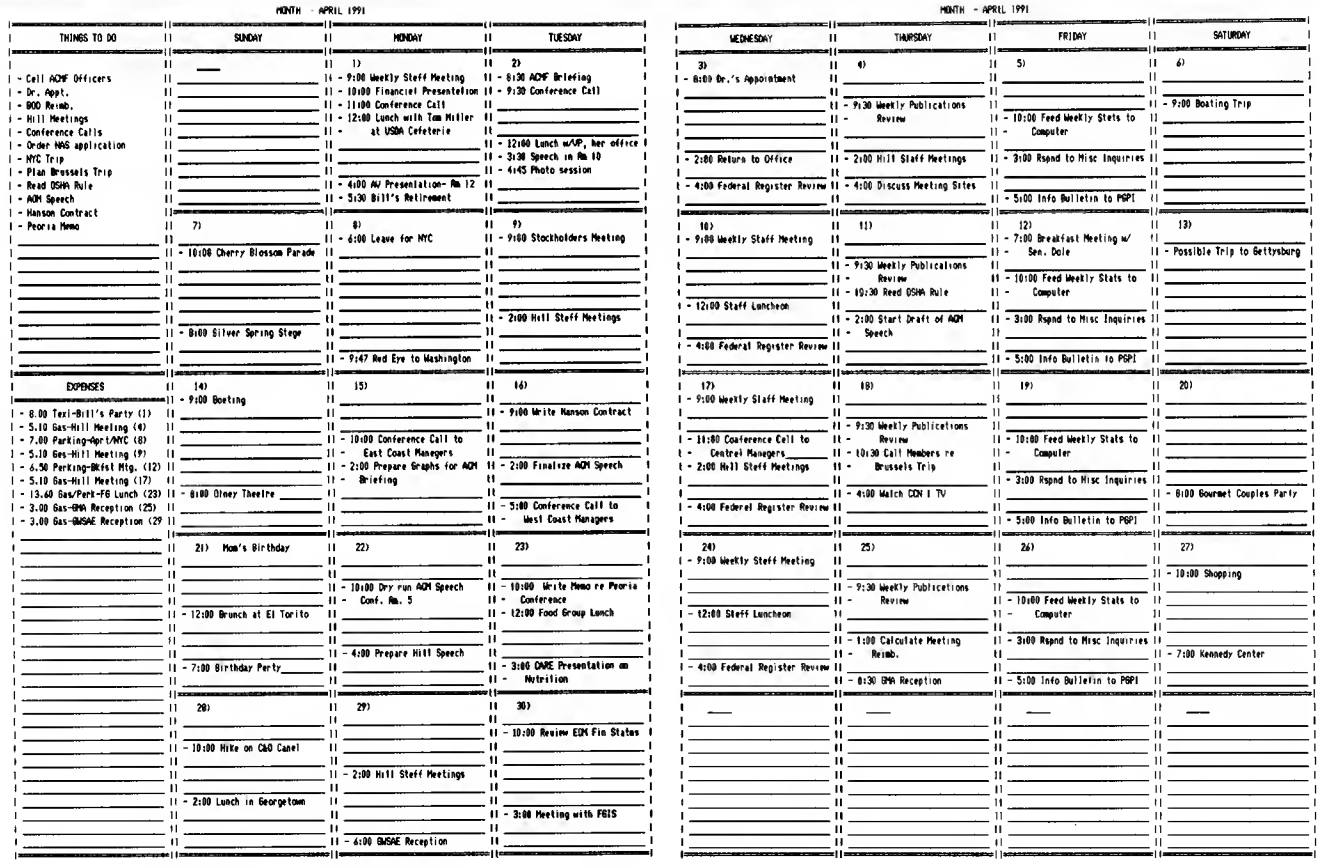
Figure 2: Monthly Calendar on the Screen

```
File: APRIL 1991                    REVIEW/ADD/CHANGE          Escape: Main Menu
===J=K=====L=========M==========N====O=P=====Q=========R==========S====T=U==
 2|APRIL 1991
 3|=||=============================||=============================||==
 4| ||            MONDAY            ||            TUESDAY            ||
 5|=||=============================||=============================||==
 6| ||    1)                       ||    2)                       ||
 7| || - 9:00 Weekly Staff Meeting ||  - 8:30 ACMF Briefing _______ ||
 8| || - 10:00 Financial Presentation || - 9:30 Conference Call     ||
 9| || - 11:00 Conference Call     ||  ________________________ ||
10| || - 12:00 Lunch with Tom Miller ||  ________________________ ||
11| || -      at USDA Cafeteria    ||  ________________________ ||
12| || ________________________ ||  - 12:00 Lunch w/VP, her office ||
13| || ________________________ ||  - 3:30 Speech in Rm 10        ||
14| || ________________________ ||  - 4:45 Photo session _______ ||
15| || - 4:00 AV Presentation- Rm 12 ||  ________________________ ||
16| || - 5:30 Bill's Retirement   ||  ________________________ ||
17|=||=============================||=============================||==
18| ||    8)                       ||    9)                       ||
19| || - 6:00 Leave for NYC _______ || - 9:00 Stockholders Meeting ||

Q2: (Label, Protect-N)

Type entry or use A commands                                  1574K Avail
```

Figure 3: Printed Monthly Calendar



MONTH - APRIL 1991

THINGS TO DO	SUNDAY	MONDAY	TUESDAY
- Call ACMF Officers - Dr. Appt. - BOD Reimb. - Hill Meetings - Conference Calls - Order HAS application - NYC Trip - Plan Brussels Trip - Read OSHA Rule - ACM Speech - Hanson Contract - Peoria Memo		1) - 9:00 Weekly Staff Meeting - 10:00 Financial Presentation - 11:00 Conference Call - 12:00 Lunch with Tom Miller - at USDA Cafeteria - 4:00 AV Presentation- Rm 12 - 5:30 Bill's Retirement	2) - 6:30 ACMF Briefing - 9:30 Conference Call - 12:00 Lunch w/AP, her office - 3:30 Speech in Rm 10 - 4:45 Photo session
EXPENSES - 8.00 Taxi-Bill's Party (1) - 5.10 Gas-Hill Meeting (4) - 7.00 Parking-Apt/NYC (8) - 5.10 Gas-Hill Meeting (9) - 6.50 Parking-Bkfst Mtg. (12) - 5.10 Gas-Hill Meeting (17) - 13.60 Gas/Park-FG Lunch (23) - 3.00 Gas-EMA Reception (25) - 3.00 Gas-GWSAE Reception (29	7)	8) - 6:00 Leave for NYC - 9:47 Red Eye to Washington	9) - 9:00 Stockholders Meeting - 2:00 Hill Staff Meetings
	14) - 9:00 Boating - 8:00 Olney Theatre	15) - 10:00 Conference Call to - East Coast Managers - 2:00 Prepare Graphs for ACM - Briefing	16) - 9:00 Write Hanson Contract - 2:00 Finalize ACM Speech - 5:00 Conference Call to - West Coast Managers
	21) Mom's Birthday - 12:00 Brunch at El Torito - 7:00 Birthday Party	22) - 10:00 Dry run ACM Speech - Conf. Rm. 5 - 4:00 Prepare Hill Speech	23) - 10:00 Write Memo re Peoria - Conference - 12:00 Food Group Lunch - 3:00 CARE Presentation on - Nutrition
	28) - 10:00 Hike on C&O Canal - 2:00 Lunch in Georgetown	29) - 2:00 Hill Staff Meetings - 6:00 GWSAE Reception	30) - 10:00 Review EDM Fin Status - 3:00 Meeting with FGIS

MONTH - APRIL 1991

WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
3) - 8:00 Dr.'s Appointment - 2:00 Return to Office - 4:00 Federal Register Review	4) - 9:30 Weekly Publications - Review - 2:00 Hill Staff Meetings - 4:00 Discuss Meeting Sites	5) - 10:00 Feed Weekly Stats to - Computer - 3:00 Rspnd to Misc Inquiries - 5:00 Info Bulletin to PGPI	6) - 9:00 Boating Trip
10) - 9:00 Weekly Staff Meeting - 12:00 Staff Luncheon - 4:00 Federal Register Review	11) - 9:30 Weekly Publications - Review - 10:30 Read OSHA Rule - 2:00 Start Draft of ACM - Speech	12) - 7:00 Breakfast Meeting w/ - Sen. Dole - 10:00 Feed Weekly Stats to - Computer - 3:00 Rspnd to Misc Inquiries - 5:00 Info Bulletin to PGPI	13) - Possible Trip to Gettysburg
17) - 9:00 Weekly Staff Meeting - 11:00 Conference Call to - Central Managers - 2:00 Hill Staff Meetings - 4:00 Federal Register Review	18) - 9:30 Weekly Publications - Review - 10:30 Call Members re - Brussels Trip - 4:00 Watch CSPAN 1 TV	19) - 10:00 Feed Weekly Stats to - Computer - 3:00 Rspnd to Misc Inquiries - 5:00 Info Bulletin to PGPI	20) - 8:00 Gourmet Couples Party
24) - 9:00 Weekly Staff Meeting - 12:00 Staff Luncheon - 4:00 Federal Register Review	25) - 9:30 Weekly Publications - Review - 1:00 Calculate Meeting - Reimb. - 8:30 EMA Reception	26) - 10:00 Feed Weekly Stats to - Computer - 3:00 Rspnd to Misc Inquiries - 5:00 Info Bulletin to PGPI	27) - 10:00 Shopping - 7:00 Kennedy Center

An Example

Here is an example of how to use FlexiCal. (I have UltraMacros installed on my system; the procedures are slightly different if you do not own UltraMacros.)

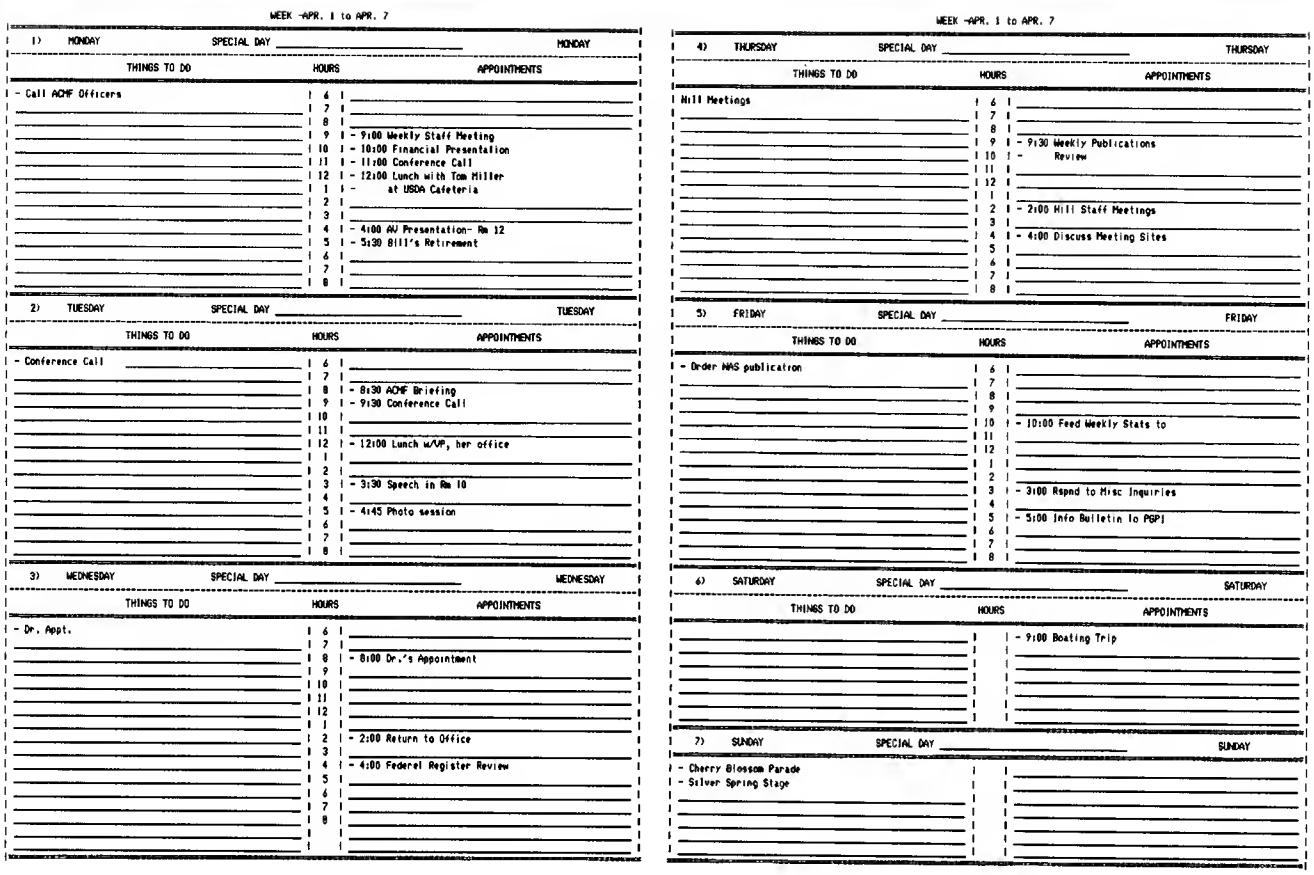
First, you launch the Task File CAL.MO.MACROS that comes on the FlexiCal disk and load the blank weekly and monthly calendar templates onto the AppleWorks desktop. Then you activate the <sa-D> macro that automatically labels the monthly calendar. The macro asks what month, year, and what day of the week the month begins. You respond to the on-screen prompts; the macro labels each block of the two-page monthly calendar (see *Figure 1*).

Now you are ready to record your appointments. I will assume that you have a staff meeting every Monday at 9am, so you will enter that appointment now. First, you invoke the macro <sa-A> (for "add") and specify the date you have the appointment. The cursor will jump to the date you specify. Then you issue a <sa-B> to blank the current entry (in this case, a blank line) and enter your 9am staff meeting.

This meeting occurs every Monday, and you could repeat these steps for each meeting. However, FlexiCal offers at least two more efficient ways to enter a repeating appointment.

One approach uses the FlexiCal clipboard. You can issue a <sa-C> to copy the entry onto the clipboard, enter a <ba-down arrow> to move the cursor to the same position for the following week, and issue a <ba-m> to copy the stored information from the FlexiCal clipboard to the new location. Although it is not specified in the FlexiCal manual, you can also use data stored on the FlexiCal clipboard to add appointments to your schedule for any other month that is on the AppleWorks desktop.

Figure 4: Printed Weekly Calendar



WEEK -APR. 1 to APR. 7

1) MONDAY SPECIAL DAY _____ MONDAY

THINGS TO DO	HOURS	APPOINTMENTS
- Call ACMF Officers	6	
	7	
	8	
	9	- 9:00 Weekly Staff Meeting
	10	- 10:00 Financial Presentation
	11	- 11:00 Conference Call
	12	- 12:00 Lunch with Tom Miller
	1	- at USDA Cafeteria
	2	
	3	
	4	- 4:00 AV Presentation- Rm 12
	5	- 5:30 Bill's Retirement
	6	
	7	
	8	

2) TUESDAY SPECIAL DAY _____ TUESDAY

THINGS TO DO	HOURS	APPOINTMENTS
- Conference Call	6	
	7	
	8	- 8:30 ACMF Briefing
	9	- 9:30 Conference Call
	10	
	11	
	12	- 12:00 Lunch w/VP, her office
	1	
	2	
	3	- 3:30 Speech in Rm 10
	4	
	5	- 4:45 Photo session
	6	
	7	
	8	

3) WEDNESDAY SPECIAL DAY _____ WEDNESDAY

THINGS TO DO	HOURS	APPOINTMENTS
- Dr. Appt.	6	
	7	
	8	- 8:00 Dr.'s Appointment
	9	
	10	
	11	
	12	
	1	
	2	- 2:00 Return to Office
	3	
	4	- 4:00 Federal Register Review
	5	
	6	
	7	
	8	

WEEK -APR. 1 to APR. 7

4) THURSDAY SPECIAL DAY _____ THURSDAY

THINGS TO DO	HOURS	APPOINTMENTS
Hill Meetings	6	
	7	
	8	
	9	- 9:30 Weekly Publications
	10	- Review
	11	
	12	
	1	
	2	- 2:00 Hill Staff Meetings
	3	
	4	- 4:00 Discuss Meeting Sites
	5	
	6	
	7	
	8	

5) FRIDAY SPECIAL DAY _____ FRIDAY

THINGS TO DO	HOURS	APPOINTMENTS
- Order NAS publication	6	
	7	
	8	
	9	
	10	- 10:00 Feed Weekly Stats to
	11	
	12	
	1	
	2	
	3	- 3:00 Rspnd to Misc Inquiries
	4	
	5	- 5:00 Info Bulletin to PGPI
	6	
	7	
	8	

6) SATURDAY SPECIAL DAY _____ SATURDAY

THINGS TO DO	HOURS	APPOINTMENTS
		- 9:00 Boating Trip

7) SUNDAY SPECIAL DAY _____ SUNDAY

- Cherry Blossom Parade		
- Silver Spring Stage		

Another alternative is to invoke macro <sa-R> which lets you relocate information to any date you specify. That macro lets you enter meetings that occur at different days of the week; for example, meetings that occur on the 15th of every month. Yet another macro lets you automatically reschedule any appointment to a different date. You can even move the appointment to another month using the clipboard technique that I mentioned earlier.

At no time does the program warn you if you are about to enter conflicting appointments, but you can easily see the conflict on the screen as you enter your data.

Figure 2 depicts a portion of a monthly schedule as it would appear on the screen. *Figure 3* presents a complete monthly calendar printed on two 8.5" x 11" pages as you would carry it when you are away from the computer.

Other macros built into FlexiCal let you move easily from one section or calendar to another, and additional macros can automatically transfer information from the monthly calendar to a weekly calendar you can carry with you (see *Figure 4*). In addition, there are macros that automatically print the weekly, monthly, and daily schedules on 8.5"x 11" pages that fit in a three-ring binder.

When I am at my desk I keep the calendars on the AppleWorks desktop and update the schedule as my appointments change. When I am away from the computer, I carry the printed schedule generated by FlexiCal and write my new appointments into the printed output. Then I enter these appointments into the computer at the end of the day.

While the appointment scheduler is the core of FlexiCal, other segments of the program help you keep a "to do" list, a list of your expenses, and a list of "special days" such as birthdays and an-

How to Manage Your Macros

FlexiCal is one of an increasing number of programs that replace the UltraMacros default macro set with customized macros. After you run these programs, you want to be able to restore your default macros. Here are some ways to proceed:

If you store your default macros in an AppleWorks word processor file, bring that file onto the screen, press <oa-Esc> to invoke the TimeOut Menu, select "Macro Compiler" and compile the file.

If you prepared a Task File containing your default macros, display the TimeOut Menu, select "Macro Options" and choose the appropriate Task File from the list that appears on your screen.

If you own UltraMacros 3.0 or later, here is an easy way to restore your default macros from within any application: With the TimeOut Menu on the screen, select "Macro Options". Then highlight "Launch a new Task" and enter an <oa-Rtn>. UltraMacros will display the location of ULTRA.SYSTEM; press the Return Key to reactivate UltraMacros and restore the default macro set.

Finally, if you use UltraMacros 3.0 or later, you can add a macro to the FlexiCal Task File that restores your default macros with a single keystroke. (This procedure works with any application that replaces your default macros with those supplied with the program.) Insert a backup copy of FlexiCal in a drive and proceed as follows (You will need to know the name of the Task File you launched with the application. For example, FlexiCal uses CAL.MO.MACROS; AlphaCheck uses ALPHA.TASK.

1. With the FlexiCal monthly calendar on the screen, press <sa-!> to make certain that the appropriate FlexiCal macros are active.
2. Press the Escape Key and create a new word processor file. Give that file the name assigned to the Task File required for your current application. For example, if you are using FlexiCal, name the word processor file "CAL.MO.MACROS".
3. Press <oa-Esc> to display the TimeOut Menu and choose "Macro Compiler".
4. With the Macro Compiler on the screen, select "Display current macro set".
5. Get the macros on the screen. Scroll through the macros to find a key that is not used to launch a macro (e.g., FlexiCal does not use <sa-Z>).
6. Press an <oa-9> and enter the following macro on a new line at the bottom of the displayed macros (You should replace the "Z" in this macro with the keystroke you want to assign to the new macro.):

```
Z:<all : launch "ULTRA.SYSTEM">!
```

7. Enter an <oa-Esc> and choose "Macro Compiler" from the TimeOut Menu. Indicate that you want to compile a new set of macros. This creates a macro set that includes all the FlexiCal macros and your new enhancement. Now you want to replace the original FlexiCal Task File with your enhanced set of macros.
8. Enter an <oa-Esc> and select "Macro Options" from the TimeOut Menu.
9. Choose "Create a Task File" from the Options Menu and name the Task File CAL.MO.MACROS (or whatever name is assigned to the original Task File). That will replace the original FlexiCal Task File with your enhanced version.

niversaries. Macros on the disk help you manage these lists.

Ease of Use

FlexiCal includes almost fifty macros that help you manage your calendars and lists. While these macros make it easy to use the program, they would be less than useful if you could not remember the commands that invoke each macro. To his credit, the author anticipated this problem and assigned these keystrokes mnemonically. For example, <sa-A> adds an appointment, <sa-T> transfers appointments from the monthly calendar to the weekly calendar, and <sa-S> lets you enter "Special Day" notices.

On-screen help is available throughout the program; issue a <sa-?> and the program displays a "pop-up" help screen to remind you of the commands available at that moment. The author also provides numerous screen prompts within macros that help you enter the necessary data.

You should plan to spend between 30-45 minutes putting the program through its paces before start-

ing your own calendar. You need the documentation to get started with FlexiCal, but I found the program easy to learn and use.

Documentation

The FlexiCal documentation consists of 14 pages in an AppleWorks word processor file on the disk and includes a step-by-step tutorial that helps you get started with the program. The documentation is easy to read, is detailed, and well written. I rate the documentation "excellent".

Support

There is no telephone support available for FlexiCal. As with all products distributed by JEM Software, you send JEM your questions in writing and you get either a letter or a telephone call from the author with an answer. Since the answers come from the author, they are accurate and complete. However, the need for written communication means it will take at least one week to get answers to your questions. I rate the technical support for FlexiCal "fair".

Limitations

One of the limitations of FlexiCal is shared by every developer of personal scheduling software; how to display a complete set of weekly or monthly appointments on the screen at one time. FlexiCal can display the appointments for two days on the screen, but you must scroll around the AppleWorks spreadsheet to view the appointments for other days. The only way to get an overview of your weekly or monthly schedule is by printing the schedule on paper.

FlexiCal stores each monthly calendar in a separate AppleWorks spreadsheet file. Thus, you cannot scroll through the calendar for different months. In addition, you can only work on one month's schedule at a time and must issue an Apple-Q command to switch between calendars. This places a number of limitations on the program. For example, you cannot tell the program to automatically insert an appointment on the second Tuesday of each month. You must copy those appointments into each monthly calendar.

You can use FlexiCal with up to ten other AppleWorks files on the desktop and can issue an Apple-Q command to switch between those files and FlexiCal. However, the Task File you load to run FlexiCal replaces your default macro set with the macros supplied with the program. Thus, you lose immediate access to your default macros after you start running FlexiCal. If you have TimeOut UltraMacros, you can write a macro that switches you back to your default macro set. Once you add that macro to the FlexiCal Task File, you can alternate between your default macros and the FlexiCal macros with a single keystroke. (See the sidebar entitled "How to Manage Your Macros" for the details of this process.)

Finally, on a few occasions a macro did not seem to work as I expected. I pressed an Apple-Q followed by a Return and the problem disappeared.

Value

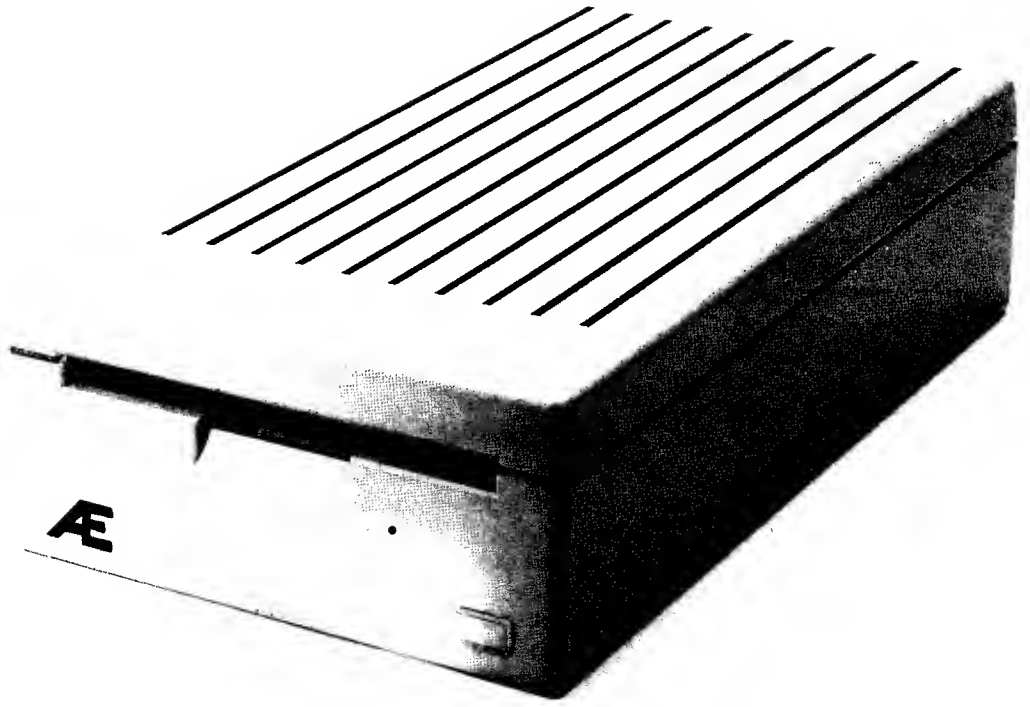
FlexiCal costs $30 and saves you from buying desk or pocket calendars. While the program does not include many features available on Macintosh and MS-DOS packages that cost $100 and more, the $30 price makes FlexiCal an excellent value.

Summary

FlexiCal is an excellent AppleWorks enhancement that helps you organize and maintain your appointment calendars and "to do" lists. I recommend the program to any AppleWorks user who has a busy schedule. Less busy people may want to continue to use pocket or desk organizers or Print Shop calendars.

[FlexiCal lists for $30.00 from JEM Software, Box 20920, El Cajon, California 92021.]

[Gary Hayman is a Certified Hypnotherapist in private practice in McLean, Virginia. He is on the Board of Directors of the Washington Apple Pi Users Group (WAP) and chairs WAP's AppleWorks and Apple IIGS Special Interest Groups.]



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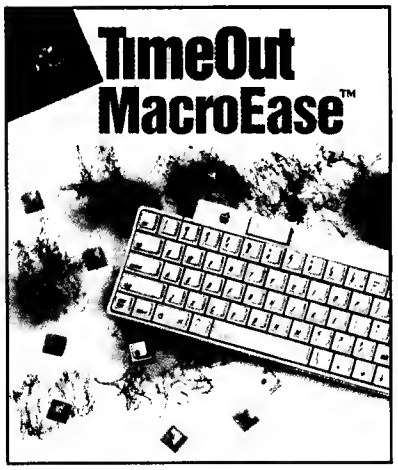

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MacroEase lets you create your own custom AppleWorks menus, write your own interactive multiple choice quizzes, balance your checkbook, even take out the trash. (Well, not quite. We're still working on that part.) ***$39.95***

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TimeOut TextTools is for serious Word Processor users. The applications included with TextTools take the drudgery out of producing long or complicated documents—reports, thesis papers, newsletters, even your Great American Novel.

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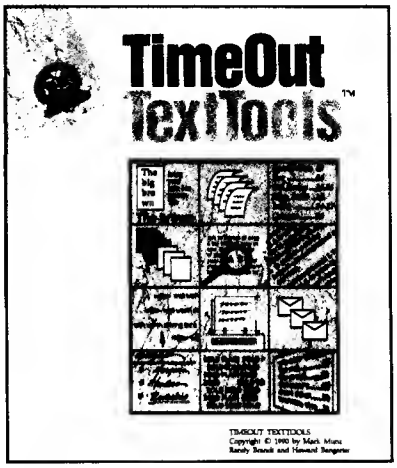

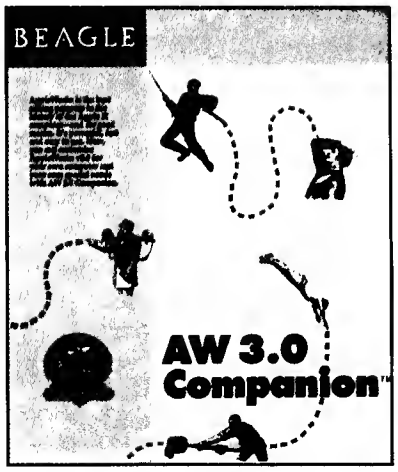

AW 3.0 Companion

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TimeOut MacroEase, AW 3.0 Companion and TimeOut TextTools all require AppleWorks v3.0 and work on an Apple IIe, IIc, IIc+ or IIGS with one 5.25 or 3.5 inch disk drive. TimeOut MacroEase also requires UltraMacros v. 3.0.

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Faster Scrolling on an Apple IIGS

by Cathleen Merritt

If you ever want to look through an AppleWorks file faster than the Arrow Keys can move you, you should learn how to control the speed of the Arrow Keys on the Apple IIGS.

The IIGS Arrow Keys can scroll through a document at three different speeds. Hold down the Arrow Key and the cursor will scroll at its slowest speed. If that is not fast enough, press the Control Key as you hold down the Arrow Key; the cursor will scroll at twice its normal rate. For the fastest scrolling, set the "Dual Speed Keys" setting on the Control Panel to "Fast". Then hold down the Control Key as you press the Arrow Key; the cursor will move along at four times its normal speed. Release the Control Key and the scrolling speed will return to normal.

The settings necessary to change the scrolling speed appear on the Options Menu on the Control Panel. Follow these steps to access the Options Menu:

1. Issue an Apple-Control-Escape to invoke the IIGS Desk Accessories.
2. With the Desk Accessories Menu on the screen, select "Control Panel" and press the Return Key.
3. With the Control Panel on the screen, select "Options" and press the Return Key.

Then set the "Dual Speed Keys" setting to "Fast" to get the fastest scrolling speed available from your system.

Some Additional Settings

Here are some other settings that can speed up your system:

1. Set the "Fast Space/Delete Keys" setting to "Yes" and you can get dual speed Space Bar and Delete Keys. The Space Bar and Delete Keys will work at their normal speeds until you hold down the Control Key. Hold down the Control Key and press Space Bar or Delete Key, and the repeat speed of those keys will double.
2. The "Repeat Speed" setting controls how fast a key repeats when you hold it down. The further to the right you have this setting, the faster all the keys (including the Arrow Keys) repeat. You can highlight this setting and press the Right-Arrow Key to speed up the repeat speed of all keys on the keyboard.
3. The "Repeat Delay" setting controls how long you must hold a key down before it starts repeating. The further to the left you have this setting, the sooner the keys start repeating.
4. TimeOut UltraMacros lets you use a mouse with AppleWorks. If you set the "High Speed Mouse" setting on the Control Panel Options Menu to "Yes", you will find that the cursor is more responsive to your mouse movements.
5. Finally, return to the Control Panel and check if the System Speed option is set to "Fast". AppleWorks really slows down when you have the speed set to "Normal".

Practical Joke

If you like practical jokes, try changing the speed-sensitive Control Panel settings on some unsuspecting user's system. For example, try setting the Repeat Speed all the way to the right (the fastest setting) and the Repeat Delay all the way to the left (shortest delay). Anyone who uses that computer will be in for some surprises until they figure out how your settings affected their system.

[The idea for this article came from a note by an unknown author that appeared in the Desert Dialog, the newsletter of the Southern Nevada Apple Family Users Group in Las Vegas, Nevada.]

How to Add an Alarm Clock to AppleWorks

by William Neef

If I had to draw an inference about the personalities of my fellow AppleWorks users from the macros they submit to **NAUG**, I would conclude that they are a punctual lot. I base that inference on the many "alarm clock" macros submitted by members. While these macros all work differently, they share a common function: They keep track of the time and sound an alarm at a time you specify.

My favorite set of AppleWorks alarm clock macros was developed by Keith Johnson, Associate Director of the Planetarium at the University of Nevada. Mr. Johnson's macros require version 3.0 of AppleWorks but can be revised to work with AppleWorks 2.0 and 2.1.

After you add these macros to your default macro set, the command <sa-ctrl-A> controls the clock. If the alarm is set, <sa-ctrl-A> deactivates the alarm. If the alarm is not set, the macro prompts you for the time you want the alarm to ring, displays the time it will sound, and "goes to sleep" until the appointed moment. Then the macro awakens, sounds a two-tone beep, flashes a portion of the screen, and restores the UltraMacros default settings.

For Macro Writers

Some elements in Mr. Johnson's macros should interest macro authors.

1. Mr. Johnson uses the same keystroke definitions for both the main macro and one of the subroutines. This technique helps keep your macros organized, but only works under two conditions: First, you must define the subroutine macro as an <asr> macro, thus insuring that it cannot be called from the keyboard. Second, the subroutine macro must appear before the main macro. Whenever you call a macro, UltraMacros starts searching for that macro from the top of the list of macros. Thus, the command <sa-ctrl-A> in the main macro, tells UltraMacros to look for macro <ctrl-A>, starting with the first macro on the list. By putting the subroutine before the main macro, you insure that UltraMacros locates the subroutine before it "hits" the main macro.

2. The alarm clock macro displays an hourglass at the bottom of the Main Menu screen. The hourglass is a mousetext character with an ASCII value of 195. The author displays that icon by poking the value 195 into address 2951. (He used a "memory peeker" macro to find the location of a blank space after the message at the bottom of the Main Menu screen.)

   However, the author faces a problem trying to display the hourglass; it only appears the next time you displayed the Main Menu. If you are at the Main Menu when you turn on the alarm, the hourglass does not appear until the next time you return to that menu.

   The <ctrl-A>:<asr> subroutine solves this problem by immediately printing the hourglass symbol (or a blank space, if you are turning the alarm off instead of on) as a message at the bottom of the Main Menu screen.

   The <ctrl-A>:<asr> subroutine checks for the Main Menu by looking for a value of one in address $ØE86. (AppleWorks uses $ØE86 to store the "Organizer in memory" flag. AppleWorks always displays either a file or loads the "Organizer" and displays a menu. A "Ø" in address $ØE86 indicates there is a file on the screen. A "1" in that location indicates that the Organizer is in memory and a menu or the Desktop Index is on the screen.) If the macro finds a "1", it immediately prints the hourglass symbol as a mes-

sage at the bottom of the screen. If it finds a "Ø" in $ØE86, the macro does not display the message.

3. The "getvar 8" and "putvar 8" commands in the macro are only necessary if you use variable t in any other macro. If any other macro changes t, variable t will no longer store the correct data for the alarm setting.

   If you use variables to store settings, sooner or later you will run out of unused variables. Mr. Johnson demonstrates how you can use the getvar and putvar commands to store different sets of variables. This assures that changing a variable in one macro does not affect the same variable in another macro.

   The author uses variable set 8 as a "storage set". He "gets" variable set 8, checks the current setting of t, changes it if he wants, and uses the "putvar 8" command to store the variable settings safely before exiting the macro. That lets him run other macros that use variable t without affecting the alarm clock settings.

4. Note Mr. Johnson's use of a control-X keystroke at the beginning of the <ctrl-B> macro. Control-X is an "illegal" keystroke that does nothing in either AppleWorks or UltraMacros.

   Mr. Johnson is about to sound the alarm and wants

Figure 1: Alarm Clock Macros

```
<ctrl-A>:<asr :                 { Define macro to display hourglass if Main Menu is on screen. }
 x = peek $ØE86 :               { Check if the Main Menu is on screen.                         }
 if x = 1 then msgxy 45,23 :    { If it is...                                                  }
 msg $9 :                       { ...display hourglass in correct location.                    }
 msgxy Ø,128>!                  { Reset the message location and return to the main macro.     }

<ctrl-A>:<all><onerr stop :     { Define the main macro. Stop if AppleWorks rings its "bell".  }
 getvar 8 :                     { Get variable set 8.                                          }
 if t = 1 then t = Ø :          { If the alarm is already set, unset it...                     }
   putvar 8 :                   { ...store variable set 8 with new value of t.                 }
   nosleep :                    { ...and continue the macro now.                               }
   poke 2951,32 :               { Turn off the hourglass icon...                               }
   $9 = " " :                   { ...restore variable $9 to a blank (note  space between quotes). }
   sa-ctrl-A :                  { Call <ctrl-A>:<asr> to turn off hourglass if Main Menu on screen. }
   endmacro:                    { Then stop.                                                   }
 else :                         { If the alarm is not set...                                   }
 msg ' Enter hours (Ø-23): ' :  { ...display a message asking for hours...                     }
 $1 = getstr 2 : h = val $1 :   { ...store the user's response as a numeric value...           }
 if h > 23 then bell :          { ...check if response valid; if not, beep...                  }
   msg "" : endmacro :          { ...clear the message area and stop.                          }
 else :                         { If the response is valid...                                  }
 msg ' Enter minutes (Ø-59): ' : { ...ask for the minutes...                                   }
 $2 = getstr 2 : m = val $2 :   { ...store the user's response as a numeric value...           }
 if m > 59 then bell :          { ...check if response valid; if not, beep...                  }
 msg "" : endmacro :            { ...clear the message area and stop.                          }
 else :                         { If all entries are valid...                                  }
 msg ' Alarm is set for ' + $1 + ':' + $2 + '. (Press a key.) ' :  { ...display the time alarm is set to. }
 k = key : msg "" :             { Clear message when user presses any key.                     }
 t = 1 :                        { Set a flag indicating that the clock is on.                  }
 putvar 8 :                     { Store variable set 8.                                        }
 poke 2951,195 :                { Poke hourglass icon into end of  "Type number..." line on Main Menu. }
 $9 = chr$ 195 :                { Store the hourglass icon in variable $9.                     }
  sa-ctrl-A :                   { Call the subroutine that displays hourglass immediately if   }
                                { the Main Menu is on the screen.                              }
 wake sa-ctrl-B at h:m>!        { Put bell macro to sleep until the time you set.              }

<ctrl-B>:<all :                 { Define the bell subroutine macro.                            }
 ctrl-X :                       { Turn on screen if screen is blank.                           }
 poke 2951,32 :                 { Put a space back into end of the  "Type  number..." line     }
                                { to clear the hourglass icon.                                 }
 x = 3 :                        { Set the number of times to ring the bell.                    }
 y = peek $16C6 :               { Store current settings for pitch...                          }
 z = peek $16C8 :               { ...and duration of the bell.                                 }
 poke $16C6,5Ø :                { Set new bell duration.                                       }
 begin :                        { Start a loop.                                                }
   hilight 1,2,8Ø,2 :           { Display inverse ===== bar at top of screen.                  }
   poke $16C8, 12Ø : bell :     { Set bell to high pitch and ring the bell.                     }
   hilight Ø,2,8Ø,2 :           { Restore the normal ===== bar.                                }
   poke $16C8,16Ø : bell :      { Set bell to low pitch and ring the bell.                     }
   wait 2Ø :                    { Pause briefly.                                               }
   x = x - 1 :                  { Reduce loop counter by one.                                  }
   ifnot x = Ø then rpt :       { If bell has not rung 3 times, loop again.                    }
 else poke $16C6, y :           { Restore bell pitch to original setting.                      }
 poke $16C8, z :                { Restore bell duration to original settings.                  }
 getvar 8 :                     { Get storage set for variables.                               }
 t = Ø :                        { Set alarm flag t to indicate alarm is off.                   }
 putvar 8>!                     { Store variables in variable set 8.                           }
```

My Favorite Macro...

to flash a portion of the screen. That flashing will not appear if UltraMacros' screen preserver or TimeOut Screen Out blanked the screen. Therefore, he issues a control-X command which AppleWorks interprets as a keypress but does nothing in either AppleWorks or UltraMacros. The control-X reactivates the screen if the screen preserver or Screen Out blanked the display.

My thanks to Keith Johnson for developing, documenting, and submitting this interesting set of macros. Mr. Johnson and I also appreciate the technical information for this article provided by Randy Brandt.

[Submit your favorite macros to "My Favorite Macro, NAUG, Box 87453, Canton, Michigan 48187.]

[William Neef is a retired purchasing agent for Welding Metals, Inc. He is Treasurer of the Apple Jackson Users Group in Jackson, Michigan.]

AppleWorks Wish List

NAUG maintains a list of the features our members would like to see incorporated into AppleWorks. We occasionally publish that list and regularly share our members' wishes with Claris Corporation. (Portions of our AppleWorks Wish List last appeared in the June and September 1988 issues of the ***AppleWorks Forum***.)

The release of AppleWorks 3.0 addressed 50 of the items on our earlier list. However, user expectations and applications for AppleWorks change over time, and we want to update our list.

Please send us a description of the features you want that are missing from AppleWorks 3.0. Classify each feature as "somewhat important", "important", or "extremely important". We will compile your ideas and print an updated wish list in a future issue of the ***AppleWorks Forum***. Mail your suggestions to: AppleWorks Wish List, **NAUG**, Box 87453, Canton, Michigan 48187.

Classified Ads

The Bible for your computer now with AppleWorks files! KJV or NIV. 3.5 or 5.25, ASCII Text files or AppleWorks, need only 40K desktop. Specify size of disk, version, and file type. Send $50 to: For His Church; PO Box 13141; Overland Park, KS 66212.

Public Domain Update

Change-A-File and CheckWorks Now in NAUG's Library

Change-A-File: The **NAUG** Public Domain Library now includes Change-A-File, a utility program that converts AppleWorks files into other file formats.

Change-A-File converts AppleWorks 3.0 word processor files into files that can be read by earlier versions of AppleWorks. The program also creates text files that contain only the ASCII characters from any ProDOS file. (You can use this feature to recover the text from damaged AppleWorks word processor or data base files or to repair any file that contains control codes and other unwanted characters.) The program also converts AppleWorks word processor files into text files and changes ProDOS filetype codes.

Change-A-File is menu-driven and is easy to use. The program includes complete documentation in a word processor file on the disk. Our thanks to Harold D. Portnoy for developing Change-A-File and to William Davis for submitting this program to the **NAUG** Public Domain Library.

CheckWorks: CheckWorks is a collection of macros and data base files that automate the process of paying your bills and maintaining your financial records. The program provides a menu-driven environment that makes it easy to write checks and store your expense data in AppleWorks. CheckWorks comes pre-configured to print on Quicken checks; you can redesign the program to print on any standard check. You need both AppleWorks 3.0 and UltraMacros 3.1 to use CheckWorks.

CheckWorks is a shareware product developed and submitted to the Public Domain Library by **NAUG** member Dan Crutcher. The author requests a $10 payment if you use the program. (Send your shareware payment directly to the author.)

Change-A-File and CheckWorks are available in both 5.25-inch ($4) and 3.5-inch ($6) disks. Add $2 s/h per order. (Foreign orders by credit card only, foreign shipping additional, indicate surface or air mail delivery.) Order from **NAUG**, Box 87453, Canton, Michigan 48187.

How to Prepare Your First Spreadsheet—Part 4

by Warren Williams and Cathleen Merritt

This is the fourth in a series of articles designed to help novices use AppleWorks' spreadsheet module. This article describes how to use some of the mathematical functions built into AppleWorks, how to change the format of spreadsheet cells, and how to copy formulas. The authors assume you read the previous articles in this series.

Last month's article described how to prepare a paper and pencil sketch of a spreadsheet and how to enter sample data, establish the appropriate width for each column, and enter column headings. You used those techniques to start developing a teacher's gradebook. If you followed the exercise in that article, your gradebook should now look like the example in *Figure 1*.

Figure 1: Status of the Gradebook Example

```
File: GRADEBOOK                    REVIEW/ADD/CHANGE                    Escape: Main Menu
==========A=========B======C====D====E====F====G====H====I=====J======K======L===
  1|Semester:
  2|Class:
  3|
  4|
  5|Last        First          Tests          Homework        Average    Weight
  6|Name        Name       1    2    3    1    2    3    4  Tests Homewk    Avg
  7|=================================================================================
  8|Franklin    Benjamin   90   90   90   70   70   70   70   99.9   99.9    99.9
  9|
 10|
 11|
 12|
 13|
 14|
 15|
 16|
 17|
 18|
A3

Type entry or use ⌘ commands                                          ⌘-? for Help
```

This month, you will learn how to use some of the mathematical functions built into AppleWorks, how to format individual cells, and how to copy the formulas and format to new cells.

This lesson is a tutorial. We expect you to work at the computer and execute the steps we describe.

Continuing the Gradebook

Start by loading the GRADEBOOK template onto your AppleWorks desktop. At the moment, there are no formulas in the template; row 8 contains hypothetical data you entered to help you establish correct column widths and to serve as sample data for your calculations. The values of 99.9 in cells J8, K8, and L8 are "pictures" that depict the format you want for the output (that is, one decimal place) and the largest number of digits that should appear in those cells after you enter the correct formulas.

Your first step will be to replace these "pictures" with formulas that generate the calculated values that should appear in the gradebook.

Mathematical "Functions"

You know from the earlier articles in this series that when you enter a formula into a cell, AppleWorks hides the formula and displays the result of the calculations.

AppleWorks lets you use five different arithmetic operations in your formulas: Addition, subtraction, multiplication, division, and raising to a power. You can use these operations to calculate the average of the sample student's test scores by entering the formula (C8+D8+E8)/3 into cell J8.

A mathematician or computer programmer could use these five operations to do almost any form of calculation. However, like all spreadsheet programs, AppleWorks makes the calculating process easier by offering a set of "functions"; pre-programmed calculations that let you perform frequently-used computations without entering the step-by-step formulas necessary to generate the computed answer.

For example, AppleWorks offers an average function that automatically computes the average of a set of numbers. You enter the average function into a cell and AppleWorks displays the average of the numbers you specify.

There are more than 15 pre-programmed functions built into the early versions of AppleWorks; AppleWorks 3.0 adds 26 more functions to the list. You will know how to use many of these functions by the time you complete this series of articles.

Computing the Averages

To have AppleWorks compute the student's average test score, put the cursor in cell J8 and type @AVG(C8...E8). Then press the Return Key. The number "90" will appear in cell J8.

The formula @AVG(C8...E8) tells AppleWorks to compute and display the average of the numbers in the range of cells within the parentheses. That is, it tells AppleWorks to display the average of the numbers in cells C8, D8, and E8. @AVG only averages numbers; it ignores blank cells or cells that contain labels.

The Syntax of Functions

Every function has its own structure, or "syntax"; you must understand both the purpose and syntax of the function.

Sometimes the purpose of a function is obvious, as with the @AVG function. At other times, the purpose of the function is more obscure; as with @BLANK. Fortunately, the functions used by spreadsheet beginners are easy to understand; they include the following:

```
@SUM    Computes the sum of a set of cells.
@AVG    Computes the average of a set of cells.
@MIN    Computes the lowest number in a set of cells.
@MAX    Computes the highest number in a set of cells.
@COUNT  Counts the number of numeric entries in a set
        of cells.
```

These functions also share a common syntax or structure. All five functions require either a range or list of cells within parentheses. For example, the following are all "legal" statements:

```
@AVG (C8...E8)
@AVG (C8,D8,E8)
@AVG (C8...D8,E8)
@MIN (C8...E8)
@MIN (C8,D8,D8)
@MIN (C8...D8,E8)
```

There are some important differences between the structure of these statements; we will examine those differences later in this series of articles.

Enter Remaining Formulas

Now that you know how to enter an averaging formula, enter the formula @AVG(F8...I8) in cell K8 to tell AppleWorks to compute the average homework score for the sample student. The value 70 will appear in cell K8 when you press the Return Key.

Computing the Final Grade

Next, you will enter the formula that computes the student's final grade.

In last month's article we indicated that 60% of the final grade would be determined by the student's test scores, and 40% of the grade would be determined by the student's homework grades. Therefore, the formula should add 60% of the contents of cell J8 and 40% of the contents of cell K8.

Put the cursor in cell L8, the cell where you want the student's weighted average grade to appear. Then enter the formula

```
(J8*.6)+(K8*.4)
```

and press the Return Key. The number 82 will appear in cell L8; 82 is the weighted average of the sample student's homework and test grades. Use a calculator and check the calculations manually; make certain your results match the value that appears in the spreadsheet. Manual confirmation of each calculated value is an important part of developing a spreadsheet model.

Your gradebook should now look like the example in *Figure 2*.

Parentheses in Formulas

Even if you rarely work with numbers, you have probably seen parentheses used in formulas and calculations. Parentheses let you control the sequence in which the computer does the calculations. Normally, the AppleWorks spreadsheet does the calculations from left-to-right, much as you read a line of text. (If you know how to program a computer, you will have to "unlearn" the order of mathematical operations followed by most programming languages. Most spreadsheet programs analyze formulas from left to right, without respect for the usual order of operations followed by computer languages.) For example, when presented with the formula +A2+B1*2, AppleWorks will add the number in cell B1 to the number in cell A2 and then multiply the results by two. (The plus sign in front of the formula tells AppleWorks that this entry represents a value, not a label.)

However, there is an important exception to this calculate-from-left-to-right rule. AppleWorks first looks through a formula for parentheses. If it finds parentheses, it does the calculations within the parenthesis first, then returns to the beginning of the formula and does the remaining computations in a left-to-right fashion.

Figure 3 presents four examples to help you understand how to use parentheses in a formula.

The formula to compute the weighted average is (J8*.6)+(K8*.4). You need the parentheses because the result of (J8*.6)+(K8*.4) is very different from the result of +J8*.6+K8*.4. These differences are obvious if you substitute numbers for the cell references in these formulas and try the computations on a calculator.

One suggestion about using parentheses in formulas: Insert parentheses whenever you cannot predict how AppleWorks will calculate the results of a formula.

Figure 2: Gradebook with Formulas in Sample Data Row

```
File: GRADEBOOK                    REVIEW/ADD/CHANGE                    Escape: Main Menu
=========A=========B======C====D====E====F====G====H====I=====J======K======L===
  1|Semester:
  2|Class:
  3|
  4|
  5|Last        First          Tests            Homework        Average    Weight
  6|Name        Name        1    2    3    1    2    3    4  Tests Homewk    Avg
  7|=============================================================================
  8|Franklin    Benjamin   90   90   90   70   70   70   70    90     70      82
  9|
 10|
 11|
 12|
 13|
 14|
 15|
 16|
 17|
 18|
L8: (Value) (J8*.6)+(K8*.4)

Type entry or use ↺ commands                                          ↺-? for Help
```

Figure 3: Demonstrating the Use of Parentheses

1) 3 + 7 * 2 = 20	3) 3 + 1 / 4 = 1
2) 3 + (7 * 2) = 17	4) 3 + (1 / 4) = 3.25

While adding unnecessary parentheses makes your formulas longer than necessary, the additional parentheses will not adversely affect the operation of the spreadsheet model.

Formatting the Averages

AppleWorks automatically reports calculated values to as many decimal places as will fit within each cell. Unless you do something, the number of decimal places reported in cell L8 will vary depending on the calculated value in that cell. That can make the output unattractive and difficult to read.

AppleWorks offers a Layout Command (Apple-L) that lets you control the format of the numbers displayed in any cell. Here is how to use the Layout Command to display the averages in cells J8 through L8 with one decimal place:

1. Put the cursor in cell J8 and issue an Apple-L command.
2. Press the letter "B" to indicate that you want to format a block of entries. (A "block" is any rectangle of cells. You want to format cells J8 through L8 ... a block of three cells.)

Value Formats Available in AppleWorks

AppleWorks lets you control the format of numbers it displays in any cell or block of cells. Here are the different formats you can establish for these numbers:

Fixed: Fixed format displays every number with a fixed number of decimal places. AppleWorks asks for the number of decimal places you want to display.

Dollars: Dollar format displays numbers in the format $1,234.56 with the number of decimal places you specify. Dollar format puts a dollar sign in front of every number, puts a comma after the thousands digit, and displays negative numbers within parentheses; *e.g.*, ($1,234.56). While you generally want either no decimal places or two decimal places for dollar format numbers, AppleWorks lets you specify any number of decimal places for this value.

Commas: Comma format is identical to Dollar format except AppleWorks does not display the dollar sign.

Percent: Percent format multiplies the number in the cell by 100 and puts a percent sign after the number.

Appropriate: This format displays the number with as many decimal places as will fit in the cell. If the number is a decimal number, AppleWorks will truncate all values of zero after the least significant digit. For example, AppleWorks displays 3.50000 as 3.5 and displays 3.000 as 3.

Standard: Standard format displays the number in the format you specified as the "standard value format" for the spreadsheet. (You set standard values with the Apple-V command; we will describe that command in a future article.) The Standard format is usually the same as Appropriate.

3. AppleWorks will prompt you to "Use cursor moves to highlight Block, then press Return". Press the Right-Arrow Key twice to highlight cells J8, K8, and L8. Then press the Return Key.
4. Press the letter "V" to indicate that you want to format any values that appear in these cells.
5. AppleWorks offers a menu listing six different formats you can specify for the values. (See the sidebar entitled "Value Formats Available in AppleWorks" for a description of the different format options.) Press the letter "F" to indicate that you want to display all numbers in these cells with a fixed number of decimal places. AppleWorks will ask how many decimal places you want to display; type the number "1" and press the Return Key.

Copy the Formulas

AppleWorks would not be very convenient if you had to re-enter the averaging formulas every time you added another student to your gradebook. To ease the task of constructing templates, the program offers a command that lets you copy a set of formulas into other cells in the spreadsheet. Now that you entered the formulas that compute the averages and defined the format for those cells, you will use this command to copy the formulas and format into the corresponding cells in the next 35 rows. (Note that you format the cells before you copy them. The Copy Command copies both the formula and the format; by formatting the cell before making copies, you can copy both the formulas and the format into new cells in a single operation.)

Copying cells is like copying files; you have to think about "source cells" and "destination cells". The "source" is the original cell that you want to copy *from*. The "destination" is the place you want to copy *to*. In this example, the source consists of cells J8 through L8. The destination includes cells J9 through L42.

Follow these steps to copy the formulas into the new cells:

1. Put the cursor in cell J8, the first cell you want to copy from.
2. Issue an Apple-C to invoke the Copy Command.
3. Press the Return Key to indicate that you want to copy "Within worksheet".
4. AppleWorks asks you to highlight the source cells. Press the Right-Arrow Key twice to highlight cells J8 through L8 and press the Return Key.
5. Move the cursor to cell J9, the beginning of the destination cells. Then press the Period Key to

indicate that you want to copy into a range of cells. (You press the Period Key if you want to copy into a range of cells; press the Return Key to copy into a single set of cells.)

6. You want to copy the formulas into 35 rows to accommodate data for a maximum of 35 students. That means you want to copy the formulas into rows 9 through 44.

   Hold down the Apple Key and press the Down-Arrow Key twice. That will highlight columns J, K, and L through row 36. Then hold down the Down-Arrow Key until you highlight through row 44. Press the Return Key to indicate that you are done specifying the destination cells.

7. The AppleWorks Edit Line now displays the formula @AVG(C8...E8) and highlights the characters "C8". The Prompt Line offers the cryptic choice

   `Reference to C8? No Change  Relative.`

   You are trying to copy a formula that contains a reference to another cell. AppleWorks needs to know if you want the copies to be exact duplicates of the original formula or if you want to "adjust" the copies so they refer to different cells. More specifically:

   You are copying the formula @AVG(C8...E8) into cells J9 through J44. AppleWorks wants to know if the copies of the formula should refer to cell C8 or if they should be adjusted so they refer to the row in which they are located. If you select "No change", the formula copied into cell J9 will read "@AVG(C8..."; if you select "Relative", AppleWorks will adjust the formula in J9 so it reads "@AVG(C9...", the formula in J10 will read "@AVG(C10..." and so forth.

   You want AppleWorks to adjust the formula in each row, so press the letter "R" to choose "Relative".

Figure 5: Sample Gradebook after Copying Formulas

```
File: GRADEBOOK                    REVIEW/ADD/CHANGE                    Escape: Main Menu
==========A==========B======C====D====E====F====G====H====I=====J======K======L===
   1|Semester:
   2|Class:
   3|
   4|
   5|Last        First          Tests            Homework        Average    Weight
   6|Name        Name        1    2    3    1    2    3    4  Tests Homewk    Avg
   7|=================================================================================
   8|Franklin    Benjamin   90   90   90   70   70   70   70   99.9   99.9    99.9
   9|                                                         ERROR  ERROR   ERROR
  10|                                                         ERROR  ERROR   ERROR
  11|                                                         ERROR  ERROR   ERROR
  12|                                                         ERROR  ERROR   ERROR
  13|                                                         ERROR  ERROR   ERROR
  14|                                                         ERROR  ERROR   ERROR
  15|                                                         ERROR  ERROR   ERROR
  16|                                                         ERROR  ERROR   ERROR
  17|                                                         ERROR  ERROR   ERROR
  18|                                                         ERROR  ERROR   ERROR
-------------------------------------------------------------------------------------
J8: (Value, Layout-F1) @AVG(C8...E8)

Type entry or use ⌘ commands                                          ⌘-? for Help
```

8. AppleWorks continues to display the formula @AVG(C8...E8) but now highlights the reference to cell E8. Press the letter "R" again because you also want AppleWorks to adjust this cell reference so it is relative to the row in which the formula appears.

9. AppleWorks now displays the formula in cell K8 and asks whether you want to copy the reference to cell F8 with no change or by making it relative to the row in which the copy appears.

As you must now realize, you want to copy all these formulas with "Relative" cell references. Therefore, you should continue to press the "R" key in response to the "Reference to... (No Change) (Relative)" prompt. (If you use AppleWorks 3.0, you can enter an Apple-R to indicate that all your answers are "Relative".)

AppleWorks will copy the formulas into cells J9 through L44 and your spreadsheet should look like the example in *Figure 5*.

Don't be concerned about the ERROR messages in cells J9 through L44. AppleWorks is trying to compute the averages in those cells. Computing averages involves summing the values in the specified cells and dividing by the number of entries in those cells. Since the cells are empty, AppleWorks is trying to divide by zero, and the attempts to divide by zero are generating the error messages.

Figure 6: Completed Gradebook Template

```
File: GRADEBOOK                    REVIEW/ADD/CHANGE                    Escape: Main Menu
==========A==========B======C====D====E====F====G====H====I=====J======K======L===
   1|Semester:
   2|Class:
   3|
   4|
   5|Last        First          Tests            Homework        Average    Weight
   6|Name        Name        1    2    3    1    2    3    4  Tests Homewk    Avg
   7|=============================================================================
   8|                                                          ERROR  ERROR   ERROR
   9|                                                          ERROR  ERROR   ERROR
  10|                                                          ERROR  ERROR   ERROR
  11|                                                          ERROR  ERROR   ERROR
  12|                                                          ERROR  ERROR   ERROR
  13|                                                          ERROR  ERROR   ERROR
  14|                                                          ERROR  ERROR   ERROR
  15|                                                          ERROR  ERROR   ERROR
  16|                                                          ERROR  ERROR   ERROR
  17|                                                          ERROR  ERROR   ERROR
  18|                                                          ERROR  ERROR   ERROR
J8: (Value, Layout-F1) @AVG(C8...E8)

Type entry or use ⌘ commands                                          ⌘-? for Help
```

Testing Your Work

Now you will save the gradebook template on a data disk. Then you will change the name of the file (to avoid accidentally overwriting the original file on your disk), enter data into the spreadsheet, and test the accuracy of the formulas. When you are done, you will remove the temporary file from the desktop and restore the original template from the data disk.

Follow these steps:

1. Issue an Apple-S command to save your work.
2. Issue an Apple-N command to indicate that you want to change the name of the file on the desktop.
3. Issue an Apple-Y command (Yank Command) to delete the name GRADEBOOK.
4. Enter the name TEMP (an abbreviation for "temporary") and press the Return Key.
5. Put the cursor in cell D9 and enter sample data into cells D9 through I9.
6. Manually calculate the values that should appear in cells J9 through L9 and confirm that AppleWorks computed the correct values.

Once you confirm that the spreadsheet works correctly, you can delete the copy on the desktop and restore the gradebook from your data disk. Follow these steps:

7. Press the Escape Key and return to the Main Menu.
8. Choose choice #4, "Remove files from the Desktop" and remove the TEMP file from the desktop. AppleWorks warns you that you have not saved this file. Select the option that lets you "Throw out the changes to the file" and press the Return Key.

Remove the Sample Data

The last step in this lesson is to remove the sample data and save the template on a disk. Proceed as follows:

1. Put the cursor anywhere in row 8, the row that contains the sample data.
2. Issue a Delete Command (Apple-D) and choose "Rows".
3. AppleWorks will highlight row 8 and prompt you to "Use cursor moves to highlight Rows, then press Return". The program already highlighted the row you want to delete, so press the Return Key to delete the sample data.
4. Issue an Apple-S command to save the template.

Conclusion

Figure 6 depicts the completed gradebook template you developed up to this point. This spreadsheet contains all the formulas and formats necessary to record students' homework and test grades and compute their final weighted grade.

Next month we will describe how to produce letter grades and how to enhance the format of your gradebook spreadsheet.

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*[Cathleen Merritt is the Director of NAUG and is the Editor of the **AppleWorks Forum**.]*

Quick Tip

Was Your AppleWorks Patched?

by Kent Hayden

Mark Munz and Randy Brandt have already released four versions of the AW 3.0 Patcher; a program that fixes nine bugs in AppleWorks 3.0. If you are the only person who uses your copy of AppleWorks, you probably know if your program disk was patched and with what version of the Patcher. However, educators and others who keep multiple copies of AppleWorks are probably finding it difficult to remember which patches were made to their different copies of the AppleWorks program.

Fortunately, Munz and Brandt were clever enough to construct their patches so you can determine if your copy of AppleWorks was patched and with which version of the Patcher.

How to Tell

To tell if you are using a patched copy of AppleWorks, get the Main Menu on the screen and issue an Apple-? to access the Help Menu. Then scroll to the bottom of the list of commands. If the horizontal line that separates the instructions from the credits consists of a series of tildes (~), your program has not been patched. If the line consists of an inverse box symbol (or a row of equal signs on an unenhanced IIe), your program was patched with version 1.0 or 1.1 of the Patcher. Inverse diamonds appear if you patched AppleWorks with Patcher 1.2, and inverse Solid-Apples appear if your program was patched with Patcher 1.4. (The Solid-Apples display as tildes on an unenhanced IIe. Thus, if you use an unenhanced IIe, you should check your software on another machine.)

You can patch AppleWorks as often as you like; it does no harm to repeat the patching process. However, if you use UltraMacros, any other TimeOut enhancement, or if you patched AppleWorks with SuperPatch or the AW 3.0 Companion, you should start with a new copy of AppleWorks 3.0. Patch the original copy, and then install your other enhancements and patches.

Finally, make certain that you read the documentation that comes in an AppleWorks word processor file with the patching program. It contains important instructions to help you with the process.

[Ed: Version 1.4 of the AppleWorks 3.0 Patch Disk is available from NAUG's Public Domain Library, from NAUG's bulletin board, and from most on-line services and local users groups. The patches are also included on the AW 3.0 Companion Disk, a commercial product from Beagle Bros that offers more than 50 patches to enhance AppleWorks 3.0.]

[Kent Hayden manages technology transfer at Boeing Military Aircraft. He is a Beagle Buddy and Director for the Northwest Apple Pickers Users Group in Tacoma, Washington.]

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News of Interest to AppleWorks Users

Applied Engineering

Applied Engineering recently announced the development of a 3.5-inch disk drive that is compatible with Macintosh, Apple IIGS, IIc Plus, and all Apple II systems equipped with Applied's PC Transporter card. The drive is also compatible with Apple II+ and IIe systems equipped with a $79 controller card available from Applied.

The disk drive, which uses a Sony mechanism, has the same footprint as Apple's 3.5-inch drive, includes a loop to attach to a security cable, and offers a daisy chain pass-through port so it can be daisy chained with other 3.5-inch and 5.25-inch drives. The drive features separate read and write lights that let you monitor its operation.

The Applied Engineering 3.5-inch drive has a suggested retail price of $279 and is available at a discount from mail order vendors. A 1.6-megabyte high density option costs $49.

[Applied Engineering, Box 5100, Carrollton, Texas 75011; (214) 241-6060.]

Checkmate Technology

NAUG heard a rumor that Checkmate Technology, a manufacturer of Apple II memory enhancement products, was going out of business. Fortunately, that rumor proved false. According to John Kemper, the company's Director of Technical Services, Checkmate recently restructured the organization and hired a new president, but the firm plans to continue manufacturing and selling enhancement products for Apple II computers.

Of particular interest to AppleWorks users are Checkmate's AppleWorks-compatible memory expansion products and AutoRAM, a set of programs that let you use the extra memory in your computer as a RAM disk. Release 1.4 of AutoRAM is compatible with all versions of AppleWorks, including AppleWorks 3.0. (See page 33 of the January 1990 issue of the ***AppleWorks Forum*** for more information about AutoRAM. AutoRAM costs $19.95 from Checkmate.)

[Checkmate Technology, 509 S. Rockford Drive, Tempe, Arizona 85281; (602) 966-5802.]

K-12 MicroMedia

K-12 MicroMedia, a developer and distributor of AppleWorks and Microsoft Works templates and publications for schools and other educational institutions, recently released a new 24-page catalog of its offerings. For a free copy, contact K-12 MicroMedia Publishing, 6 Arrow Road, Ramsey, New Jersey, 07446; (800) 292-1997.

Zip Technology

Zip Technology recently announced the development of an 8-megahertz accelerator board for the Apple IIGS. Zip claims that the Zip GS is the fastest Apple IIGS accelerator and is compatible with all IIGS hardware and software. The board offers 16 different speed settings and allows independent control of the speaker, paddle, and all slot speeds, so acceleration does not interfere with the operation of accessories or the use of modems and hard drives. Zip describes the product as Direct Memory Access (DMA) compatible at any speed, enabling access to stored memory without processor slowdown. The Zip GS includes an 8K data cache upgradeable to 64K. The Zip GS has a suggested retail price of $299.

NAUG members are reminded that Zip Technology has a history of announcing products and accepting orders long before a product is available to customers. As of early May, **NAUG** had not seen the Zip GS board and we suggest that you not order this product until the company starts actual deliveries. We will advise members when Zip starts shipping the Zip GS to customers and when we get a sample product for review.

[Zip Technology, 5601 W. Slauson Avenue, Culver City, California 90230; (213) 337-1313.]

Should You Use QuickSpell?

By Kent Hayden

Several people have told me there is no longer a need for TimeOut QuickSpell now that there is a built-in spell checker in AppleWorks 3.0. I disagree.

QuickSpell has some important advantages when compared to the spell checker built into AppleWorks. For example, I prefer the spell checking algorithm in QuickSpell to the one used in AppleWorks. QuickSpell often gives me suggestions for misspelled words when the AppleWorks 3.0 spell checker does not. In addition, QuickSpell is faster and has several capabilities not found in AppleWorks' built-in spell checker, including a word count utility.

You can configure QuickSpell to use either its own dictionaries or those furnished with AppleWorks. Finally, the current version of QuickSpell (version 3.0) shares AppleWorks' ability to give suggestions for words spelled phonetically.

Macros Save Keystrokes

One of the problems with QuickSpell is that it takes an extra keystroke or two to invoke the program. If you have TimeOut UltraMacros, you can add the macro in *Figure 1* or *Figure 2* to your default set and invoke QuickSpell from anywhere within AppleWorks. Note that you can use these macros to call any TimeOut module by changing the name of the program in variable $Ø.

The macros in *Figure 2* use the ZMM Find Protocol macros found on the TimeOut PowerPack disk. They are printed here with the permission of Mark Munz and Randy Brandt.

[Ed: NAUG members who own QuickSpell can upgrade to version 3.0 from any one of NAUG's four Beagle Buddies. See page 33 of the March 1990 issue of the ***AppleWorks Forum*** *for the necessary update information.]*

Figure 1: Macro that Calls QuickSpell (AppleWorks 3.0)

```
<ba-Q>:<all><oa-esc :     { Call the TimeOut menu.                    }
  $Ø = "QuickSpell" :     { Set string $Ø to the name of the module.  }
  find :                  { Search the menu for the module.           }
  if Z = Ø tab :          { If not found, call the next TimeOut menu... }
  find :                  { ...and try to find it on that menu.       }
  if Z = Ø :              { If it is not on the second menu...        }
  bell :                  { ...sound the bell...                      }
  msg $Ø + ' not found' : { ...display the message...                 }
stop :                    { ...and stop.                              }
  endif :                 { If the module is found...                 }
  rtn>!                   { ...enter a Return to run it.              }
```

Figure 2: Macro that Calls QuickSpell (AppleWorks 2.x)

```
<ctrl-Q>:<all : oa-esc :  { Call the TimeOut menu.                    }
   $Ø = "QuickSpell" :    { Store module name in $Ø.                   }
   sa-ctrl-G :            { Look for $Ø. Store result in Z.           }
   if z = Ø then bell :   { If not found, sound the bell...           }
   msg $Ø + ' not found' : { ...display a message...                  }
   stop :                 { ...and stop.                              }
   elseoff :              { If the module is found...
   rtn>!                  { ...enter a Return to run it.              }

<ctrl-G>:<all :
  y = peek 7786 * 256 + peek 7785 :
                          { Get the TimeOut menu ID number.           }
 begin
  sa-ctrl-z :             { Look for item using ZMM v1.0.             }
  if z = Ø then tab :     { If not found, switch TimeOut menus.       }
  x = peek 7786 * 256 + peek 7785 :
                          { Check current TimeOut menu ID number      }
  ifnot x = y then        { If it is a new menu, keep searching.      }
 rpt>!                    { if x = y then you are back at the first   }
                          { TimeOut menu and module is not available. }

<ctrl-z>:<all :           { Original ZMM Find protocol.               }
  z = Ø : find : z = 1>!  { Returns boolean result in Z (Ø = not found, }
                          { 1 = found).                               }
```

How to Get Help with Apple IIGS Hardware and Software

by Nanette Luoma

Each month, the ***AppleWorks Forum*** lists the member-volunteers who offer technical support for AppleWorks products. This month's list identifies the volunteers who can answer questions about Apple IIGS hardware and software. Next month's issue will contain a list of members who offer help with TimeOut products and other AppleWorks enhancements from Beagle Bros.

Apple IIGS

How to Use This List

To the left of each volunteer's name are numbers indicating the utilities the consultant supports. Volunteers are listed alphabetically by state.

1 = Hardware
2 = Diversi Key
3 = SoftSwitch
4 = TransWarp GS
5 = GS/OS
6 = Desk Accessories
7 = AppleWorks GS

		City	Home	Work
Alabama				
1,5,7	Norma Gradwohl	Mobile	205-343-4905	205-343-4905
California				
1,5-7	Dan Balsley	San Ramon	415-829-5085	
1,4,7	Rolf C. Freerks	San Pedro	213-833-8266	213-337-1333
Colorado				
1,5	Lyle Graff	Littleton	303-794-5970	303-977-4557
Connecticut				
7	Martin Knight	Middletown	203-346-9698	203-347-8594
Florida				
1,4-6	H. Clay Bailey	Jacksonville	904-744-2499	904-725-3477
1,4	Robert J. Booz	Port Richey	813-868-1802	
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Correction

Please make the following corrections to page 23 of the April 1990 issue of the ***AppleWorks Forum***:

Right-hand column. Patch 3, step 3, line 7 should read **POKE 778,69**. The bottom of that column describes how to reverse this patch and restore AppleWorks to its original condition. Line 6 of that section should read **POKE 774, 69**. If you do not make this correction, Patch 3 will cause AppleWorks to drop to the monitor level on an Apple IIgs.

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